NOVEMBER 15, 1953

MODERN MEDICINE

The Journal of Diagnosis and Treatment

Dr. Joe Vincent Meigs

Bentyl *proves more effective than atropine in "Nervous Indigestion"*

FROM BETTMANN ARCHIVE

McHardy[1] reports that Bentyl is "superior to atropine" for relief of pain due to pylorospasm. He confirms the work of others that Bentyl is free from significant side effects which permits more general use in nervous indigestion.

When you prescribe Bentyl, you prescribe patient comfort. You will rarely hear patients complain about "belladonna backfire" or dry mouth and blurred vision. Use Bentyl for your next nervous indigestion patient. Relief of G.I. spasm is quick, complete and comfortable.

New technic of measuring human motility shows a decrease or complete suppression of intestinal pressure waves, depending on dosage of Bentyl.[2] Bentyl acts by blocking acetylcholine and directly affects the muscle fibers like papaverine.

COMPOSITION: Each Bentyl Capsule or teaspoonful *Bentyl Syrup* contains 10 mg. Bentyl (dicyclomine) Hydrochloride.

Also *Bentyl* (10 mg.) with *Phenobarbital* (15 mg.) *Capsules and Syrup*, and *Bentyl Injection*, 10 mg. per cc.

DOSAGE: Prescribe Bentyl, 2 capsules or 2 teaspoonfuls Bentyl Syrup three times daily and at bedtime. Infants and Children, ½ to 1 teaspoonful Syrup 10 to 15 minutes before feeding, three times daily.

1. McHardy and Brown: Sou. M.J. 45:1139, 1952.
2. Lorber and Shay: Fred. Proc. 12:90, 1953.
Complete Bentyl bibliography on request.

T.M. 'Bentyl'

Bentyl

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to prevent attacks in angina pectoris

Patient selection—Prophylactic management with Peritrate can be most effective in patients whose attacks come with relative frequency. Humphreys *et al.* found that while 78.4 per cent of all patients studied had fewer attacks, ". . . patients with the greatest number of attacks showed the greatest reduction. . . ."[1]

True angina vs. chest pain— Peritrate, which seems "specific" for angina pectoris, is virtually ineffective in angina-like chest pains of other etiology: only 5 out of 125 cases of *non*anginal chest pain improved compared with 4 out of every 5 verified cases of angina pectoris[1-3] in which Peritrate produced

- fewer attacks of angina pectoris *and/or*
- reduction in the severity of those attacks which were not prevented.

Since Peritrate must be taken on a daily schedule, patients with occasional mild attacks are best treated with nitroglycerin.

For effective prophylactic management A long-lasting coronary vasodilator, Peritrate provides prophylactic action for 4 to 5 hours. Administration must be maintained on a continuing daily schedule — usually one tablet 3 or 4 times daily. Some patients require a 2-tablet dose. Peritrate is available in 10 mg. tablets in bottles of 100, 500 and 5000.

Bibliography: *1. Humphreys, P., et al.: Angiology 3:1 (Feb.) 1952. 2. Plotz, M.: New York State J. Med. 52:2012 (Aug. 15) 1952. 3. Dailhen-Geoffroy, P.: L'Ouest-Médical, vol. 3 (July) 1950.*

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ANALGESIQUE

1. Lange, K., and Weiner, D.: J. Invest. Dermat. *12*:263 (May) 1949.

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THE JOURNAL OF DIAGNOSIS AND TREATMENT

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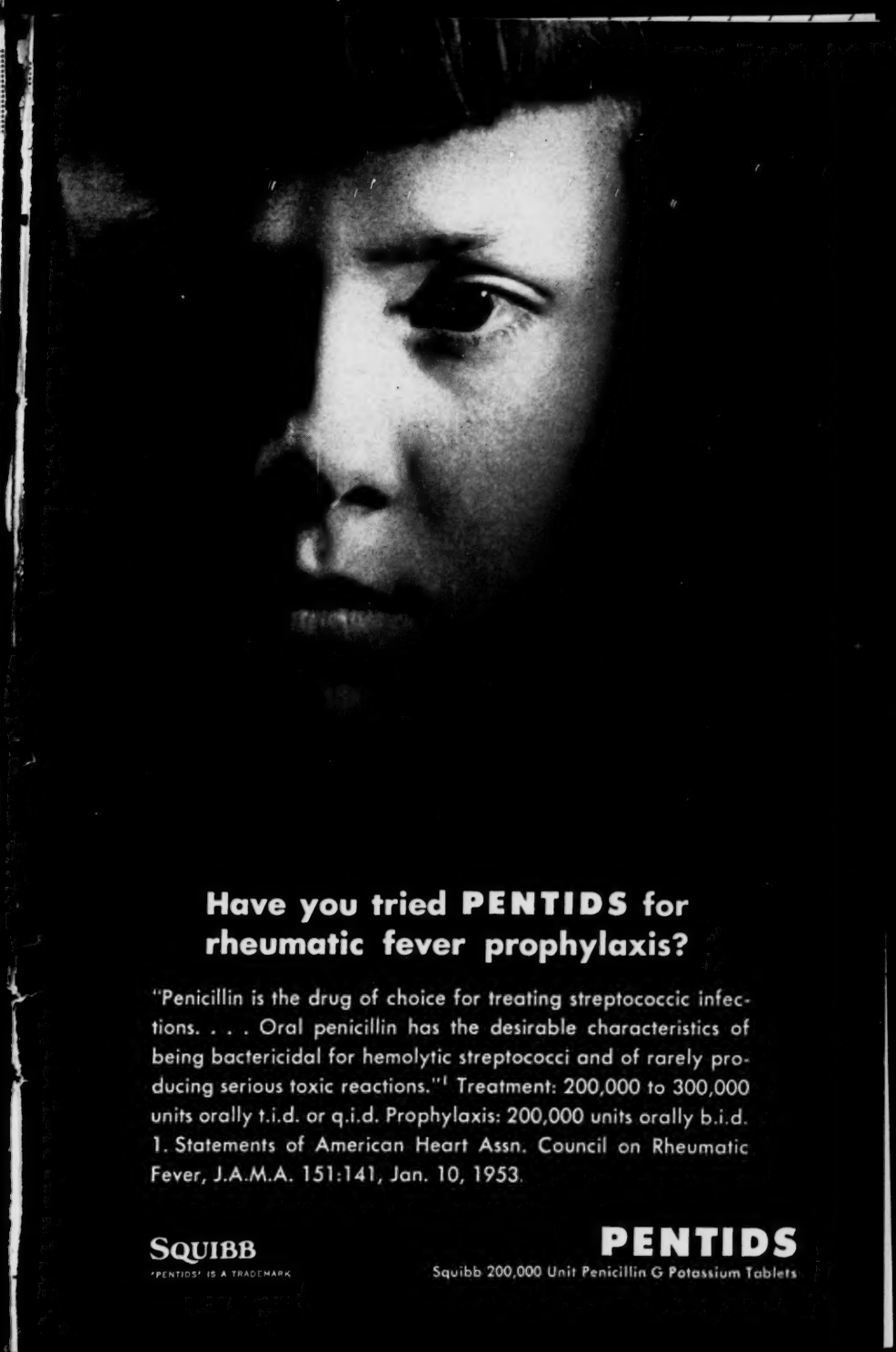
MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT



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"Penicillin is the drug of choice for treating streptococcic infections. . . . Oral penicillin has the desirable characteristics of being bactericidal for hemolytic streptococci and of rarely producing serious toxic reactions."[1] Treatment: 200,000 to 300,000 units orally t.i.d. or q.i.d. Prophylaxis: 200,000 units orally b.i.d.

1. Statements of American Heart Assn. Council on Rheumatic Fever, J.A.M.A. 151:141, Jan. 10, 1953.

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Controls Useless Nagging Cough

Syrup 'Histadyl E.C.'° is an effective combination of:

Codeine Phosphate (1 gr. per fl. oz.)
a bronchial sedative

Ephedrine Hydrochloride (1/2 gr. per fl. oz.)
a bronchodilator

Thenylpyramine Fumarate (1 1/3 grs. per fl. oz.)
an antiallergic

and Ammonium Chloride (10 grs. per fl. oz.)
an expectorant

in a pleasantly flavored syrup acceptable to both children and adults. It is available on prescription at pharmacies everywhere.

°Federal record of sale required.

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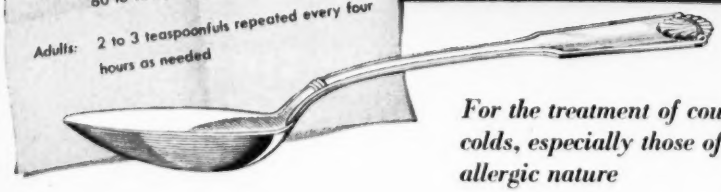
DOSAGE

Children: 30 to 50 pounds, ½ to 1 teaspoonful
50 to 80 pounds, 1 to 1½ teaspoonfuls
80 to 100 pounds, 1½ to 2 teaspoonfuls

Adults: 2 to 3 teaspoonfuls repeated every four hours as needed



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For the treatment of coughs and colds, especially those of an allergic nature

SYRUP

'Histadyl E.C.'

(THENYLPYRAMINE COMPOUND E.C., LILLY)

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for November 15 1953

Modern Medicine

Vol. 21, No. 22

●

THE MAN ON THE COVER is Dr. Joe Vincent Meigs of Boston, Clinical Professor of Gynecology at Harvard Medical School since 1942. Dr. Meigs is chief gynecologist at Massachusetts General Hospital, surgeon in charge of gynecology at Pondville Hospital, and chief of the gynecologic service at Vincent Memorial Hospital. He is a member of several medical organizations, including the American Surgical Association and the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. He is a fellow of the American College of Surgeons. Dr. Meigs is author of *Tumors of the Female Pelvic Organs* and co-editor of *Progress in Gynecology*. The report on page 110, "Age and Parity with Endometriosis," is based on one of his recent contributions to medical journals.

Contents for November 15 1953

CONTINUED

The small total dose required affords economy and virtual freedom from side actions.

HP*ACTHAR Gel, subcutaneously or intramuscularly, provides rapid relief of even severe pain, especially in the acute stage of bursitis and tendinitis.

Unlike procaine infiltration or narcotics, HP*ACTHAR Gel does not simply dull the pain. It effectively counteracts the underlying inflammatory reaction, concomitant swelling and edema. Even calcium deposits may disappear.†

†Steinberg, C. L., and Roodenburg, A. L.: J.A.M.A. 149: 1458, 1952.

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Contents for November 15 1953

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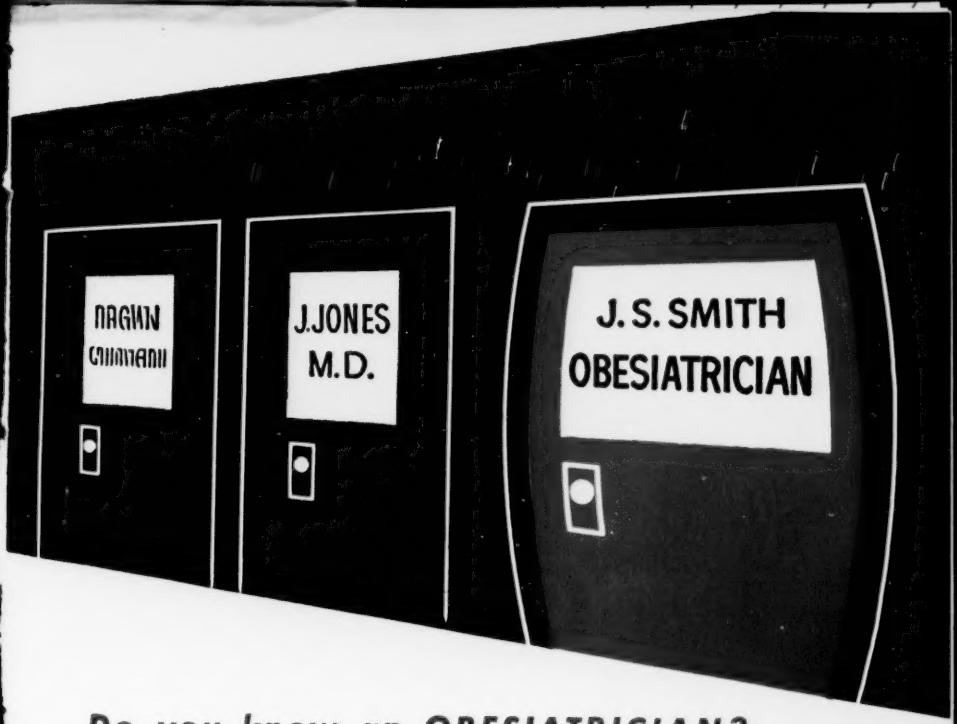

Do you know an OBESIATRICIAN?

It *could* be a full-time specialty—the treatment of obese patients. In fact, many physicians have reached the conclusion that it requires full-time application just to follow through on a single case; to reinforce the patient's will-power, sustain her (or his) mental equanimity, perhaps even stay her hand as it reaches out for that extra "little" piece of dessert.

No physician has that kind of time at his disposal.

But he can enlist the aid of clinically evaluated medication in support of his dietary instructions.

ADJUDETS supply dextro-amphetamine (as the well-tolerated phosphate) to depress appetite, yet keep the patient alert and in good mood. This easy-to-take candy-like form (only 15 calories per troche) makes taking it a welcome before-meals addition to an otherwise drab routine. ADJUDETS also supply multivitamins for diets that are restricted.

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D-AMPHETAMINE—MULTIVITAMIN TROCHES

Contents for November 15 1953

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PHOTOGRAPH BY RUZZI GREEN

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ACTIONS AND USES: With TRACINETS you can readily relieve afebrile mouth and minor throat irritations in your young patients—and in older ones, too. Acting together, bacitracin and tyrothricin are truly synergistic. Soothing local relief is afforded by benzocaine.

In severe throat infections TRACINETS Troches, by their local action, supplement antibiotic injections.

QUICK INFORMATION: Each TRACINETS Troche contains 50 units of bacitracin, 1 mg. of tyrothricin and 5 mg. of benzocaine. Available in vials of 12.

LETTER FROM THE EDITORS

Dear Reader:

Public interest in articles on personal health apparently is insatiable. Almost every consumer magazine has found it profitable to devote liberal space to material of this kind.

This avid interest on the part of the laity can be turned to the busy practitioner's advantage and conserve his time. By recommendation of suitable books or pamphlets, he may be able to satisfy the patient's natural curiosity about his particular condition without devoting office hours to prolonged and continuing interviews.

A case in point is the Special Article which appeared in the October 1, 1953 issue of *Modern Medicine,* "Modern Prenatal Instructions." This article, by Dr. Leonard H. Biskind, addressed to the patient and written in simple, nontechnical language, contained nothing new for the physician. Its virtue as far as the physician was concerned was that it provided a well-organized form of presenting to the patient information that the pregnant woman should have. The utility of such a presentation was instantly recognized by hundreds of readers. Requests for reprints have been pouring in. Doctors have wanted varying numbers for distribution among their patients. Since the special article is to be a part of the new edition of Dr. Biskind's book, *Having Your Baby,* reprints are not available, though the book soon will be.

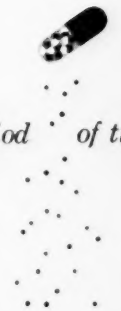
Other books written by physicians for the laity have similar potentialities for saving your time. Starting with the December 1 issue, an annotated bibliography of such books will be published in *Modern Medicine.* We hope you find it interesting and useful. After you have received your December 1 copy drop us a line telling us what you think about this new feature.

The Editors

The revolutionary new oral dosage form

Spansule*

brand of sustained release capsules

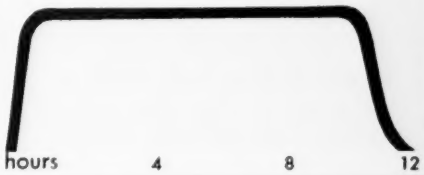


uniform release of medication over a prolonged period of time

What 'Spansule' capsules are

Each 'Spansule' sustained release capsule contains scores of tiny medication-bearing coated pellets with varying disintegration times. Upon ingestion, part of the medication is released immediately; the rest is released gradually, yet uniformly, over a period of 8-10 hours, with therapeutic effect lasting approximately 10-12 hours.

This schematic graph illustrates the typical "peak and valley" therapeutic effect with *tablets, t.i.d.*



Note—by contrast—in this graph the sustained therapeutic effect with *one 'Spansule' capsule.*

How 'Spansule' capsules differ from presently available "enteric-coated" and layered "timed-action" tablets

"Enteric-coated" tablets are designed merely to protect the medication from absorption until it reaches the small intestine—to prevent nausea or irritation from certain drugs.

Layered "timed-action" tablets simply release two individual concentrated doses—to provide a full day's medication with just one tablet. However, the therapeutic effect of such preparations is no different from that obtained with ordinary tablets taken b.i.d.

'Spansule' capsules, in marked contrast, provide a means of orally administering a drug so that a *continuous* and *uniform* supply of medication is made available for absorption throughout the day—or night.

Smith, Kline & French Laboratories • Philadelphia

*Trademark for S.K.F.'s brand of sustained release capsules (patent applied for).

(see other side)

'Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spans

Because of the advantages inherent in the 'Spansule' capsule dosage form, S.K.F. is working constantly toward the development of new 'Spansule' capsules incorporating adaptable therapeutic agents.

The following Spansule† sustained release capsules are now available:

10 mg.
&
15 mg.

Dexedrine* Spansule capsules

DEXTRO-AMPHETAMINE SULFATE, S.K.F.

for day-long control of appetite in weight reduction

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Benzedrine* Sulfate Spansule capsules

AMPHETAMINE SULFATE, S.K.F.

for relief of chronic tiredness

1 gr.
&
1½ gr.

Eskabarb* Spansule capsules

PHENOBARBITAL, S.K.F.

for continuous, even sedation throughout the day—or night

Smith, Kline & French Laboratories • Philadelphia

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*Trademark.

(see other sid

Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spansule' 'Spansu

orrespondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Difficult and Important

TO THE EDITORS: Your editorial on roentgen therapy as a placebo (*Modern Medicine*, Aug. 1, 1953, p. 65) is, to my mind, an excellent presentation of a difficult and important therapeutic problem.

I was taking care of a doctor friend of mine with lung cancer and witnessed in him, as in many others, the nausea and weakness which converted him from a man in apparent good health to an invalid unable to enjoy or even be comfortable in the months that he had to live. In such a case the remark "What else have you got to offer?" makes it difficult to resist the temptation to use x-ray even though the benefit is questionable.

The palliative treatment of inoperable cancer of the lung might well be the recommendation to try the effect of a change of climate, or something in which conceivably the patient might have some pleasureful days ahead of him. Your editorial will, I hope, make it possible for many of us to resist the use of roentgen therapy in situations which can ultimately only unfairly injure the reputation of the roentgenologist.

ALVAN L. BARACH, M.D.
New York City

Sparkling Syringes

TO THE EDITORS: Physicians utilizing boiling water to sterilize syringes will enjoy the bright-as-new condition of the glass if they add 1 tb. of Calgon to the water on Saturday night. Immersion until Monday morning, then thoroughly rinsing, and boiling the syringe will do the job.

HERMAN GOODMAN, M.D.
New York City

Disadvantages of Slides

TO THE EDITORS: The editorial on lantern slides (*Modern Medicine*, Sept. 15, 1953, p. 67) was very much to the point.

In regard to this topic I should like to add a thought from the field. Unless some care is taken, the slide, valuable as it is as a visual aid to teaching, will ruin the art of lecturing.

Many speakers are in danger of forgetting that the lantern slide should only illustrate a lecture, not give it.

Furthermore, in the darkened lecture room, note taking is impossible unless the listener has thought to equip himself with a flashlight.

ALBERT W. FELLOWS, M.D.
Bangor, Me.

Essence of Kinsey

TO THE EDITORS: The second Kinsey report spells bad news for men! The female of the species is less sexy than the male. Although girls develop pubic hair a year earlier than boys, in most other respects they mature far more slowly. What passes for "feminine passivity" is actually sexual indifference, the female being approximately 50% less responsive than the male to erotic stimuli.

Considering the importance of the concept of incest in modern psychodynamic theory, it is interesting that only two episodes were discovered in this report of nearly 6,000 women.

One wonders whether the relatively greater sexual activity of the male is one more manifestation of a basic provision in nature that if and when the bearer of the ovum is ready for fertilization, a superabundance of eager, able males should always be at hand to perpetuate the species. On the other

(Continued on page 22)

"Is this the homemade atom bomb victim?"

Pneumonia weather...
the season
for bacterial
respiratory tract
infections

a time for...

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BRAND OF OXYTETRACYCLINE

The value of Terramycin in promptly controlling otitis media, severe sinusitis, laryngotracheobronchitis, bacterial pneumonia and virtually all infections of the respiratory tract, due to or complicated by the many organisms sensitive to Terramycin, is now a matter of clinical record.

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Prescribe Clistin Maleate for your patients who have not responded to the older antihistamines.

with Better Clinical Results

A new antihistaminic compound of greater therapeutic effectiveness but with fewer side effects—just released.

NEW CLISTIN* MALEATE

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Offers *Potency*—as great as any known agent (average adult dose 4 mg.)!

Far greater margin of safety between the therapeutic dose and the toxic dose.

Low incidence of side effects—as indicated by actual clinical trial.

Palatability—practically tasteless, will not produce local anesthetic effects in mouth and throat.

Supplied in:

Tablets, 4 mg. scored, imprinted 'McNeil'—100's and 1000's.

Elixir, 24 mg. per fl. oz. Each 5 cc. (average teaspoonful) provides 4 mg. Pints and Gallons.

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*Trademark

hand, evidence of progressively increasing sexual activity by females born in each successive decade since 1890 implies that the relative sexual apathy of the female is a socially induced phenomenon that may in some future generation disappear!

Meanwhile, men will still complain that "their wives do nothing to them," and women will still protest that "men are interested in only one thing."

This is the essence of Kinsey's observations and the statistics are convincing.

ROBERT C. ROBB, M.D.

Pasadena

Loaned, Then Stolen

TO THE EDITORS: I note that a few copies of the Trauma Symposium issue are available. I loaned mine to a resident and someone stole it. May I have another?

RAYMOND HOUSEHOLDER, M.D.

Chicago

¶ Dr. Householder was sent the last extra copy of the Trauma issue. Sorry, but we will be unable to fill other requests for this issue.—Ed.

"I charged them—just till we get your hospitalization insurance check."

Fellows Chloral Hydrate

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NON-BARBITURATE
NON-CUMULATIVE
TASTELESS
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3¾ gr.
Daytime sedation—
without hangover

7½ gr.
Restful sleep—*without hangover*

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Available – 3¾ gr. (0.25 Gm.), bottles of 24's and 100's
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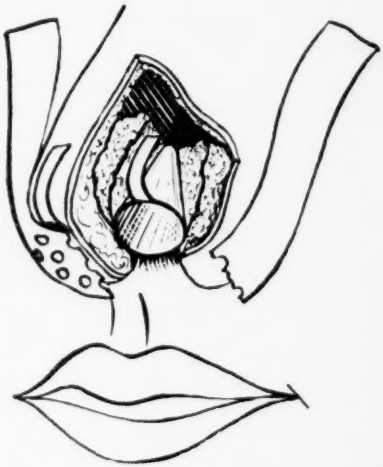
Pharmaceuticals

Nasal Pack Funnel

TO THE EDITORS: I have seen too many uncomfortable and miserable patients with nasal packs after hemorrhage, submucous resection, polypectomy, or fracture. The patients cannot eat, swallow, or sleep very well.



In an attempt to obviate this discomfort, why not use a flexible plastic or metal speculum shaped like a funnel, with flared outside rims so that it will not be "inhaled," and pack around it, yet, leave a free airway (see illustration). This funnel could be taped in place with perforated adhesive tape.

LEO L. ROSEMAN, M.D.
Champaign, Ill.

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Circulation Department

Diagnostix from Actual Case

TO THE EDITORS: In Diagnostix Case MM-245 *(Modern Medicine,* Aug. 15, 1953, p. 150), the statement was made: "Sedimentation rate at repeated times has been normal." The patient was found to have advanced plasma cell myeloma.

I wonder if the sedimentation rate has ever been normal in such a patient? I should appreciate your sending my letter to the author of this case. Please ask him if he knows of the actual existence of this combination of findings.

J. WARREN KYLE, M.D.

Memphis

¶ In reply, the author of Diagnostix Case MM-245 states: "I have checked through the original information on this case and can only repeat that the sedimentation rate was normal on several occasions, despite total protein of 7 gm. and an A/G ratio of 1:2. This may be the exception that proves the rule."—Ed.

"I don't think this is what the doctor meant when he said you should get more exercise."

SEDAMYL

helps the patient escape from the psychosomatic maze

in anxiety states

SCHENLEY LABORATORIES, INC., 350 Fifth Ave., New York

"I said at the 'nipple line,' man, not the nibble line."

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R. C. Rucker, M.D.
Chico, Calif.

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Caption Contest
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Ascorbic Acid (Vitamin C)	50 mg.
**Liver Fraction II (N.F.) with Desiccated Duodenum	350 mg.

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Supplied in bottles of 100 and 1000.

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COMPREHENSIVE ANTIANEMIA THERAPY IN A SINGLE CAPSULETTE

THE ARMOUR LABORATORIES

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Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: Are antibiotics useful for acne vulgaris in girls 14 to 20 years old, or is there a better treatment? When a girl with acne marries, the acne is gone in a short time. Why?

M.D., Mississippi

ANSWER: *By Consultant in Dermatology.* Neither topical nor systemic use of antibiotics has proved dependable in acne therapy. Systemic use helps temporarily only in deep-seated pustular types.

Numerous theories have been advanced regarding the improvement frequently occurring after marriage. Most observers believe that this improvement results from better general hygiene, including regularity of hours, sleep, and so on. Some think that emotional factors are of considerable importance in such cases. No satisfactory proof has been given for any theory.

Generally speaking, the most dependable treatment for ordinary cases of acne is a sulfur lotion or paste, in concentration great enough to produce dryness, perhaps even to the point of slight scaling. Avoidance of chocolate and nut products seems to help many individuals. Some would limit fats, also.

Endocrine therapy is useful if definite evidence is found of endocrine abnormality in addition to the acne. Possible seborrheic state of the scalp should be investigated, and any abnormal condition treated. A series of fractional doses of roentgen radiation is useful in older individuals but is necessary only in the more stubborn cases.

QUESTION: What causes the skin to crack at the edge of the nail on thumb and some fingers, especially the index finger? What is the remedy?

M.D., Missouri

ANSWER: *By Consultant in Dermatology.* The scaling dermatitis described is a type often observed in persons whose hands are in soap and water frequently or who are working with other detergents or solvents. An increased exposure or, possibly, a vague change in the general condition may make the skin more susceptible.

Exposure to the suspected causes should be avoided. Numerous hand creams are satisfactory for application and should be used often during the day. Simple lanolin is inoffensive if used in small amounts. If the condition is not relieved by this therapy, the patient may try a freshly made diachylon ointment at night, wearing cotton gloves.

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relieve symptoms

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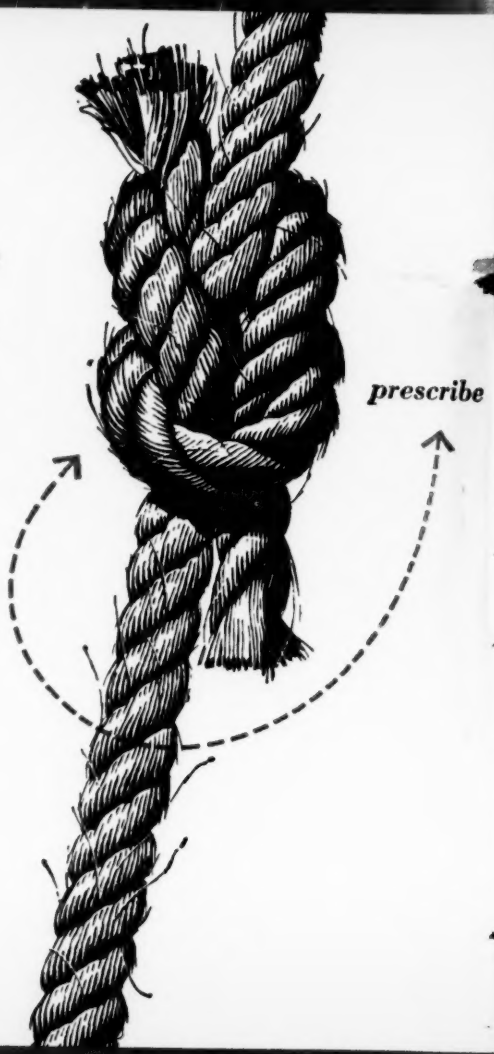

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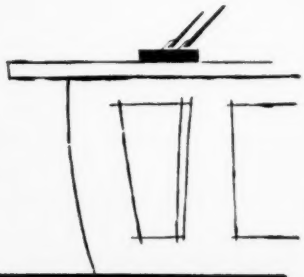

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Copper	1 mg.	Vitamin D	400 U.S.P. Units
Iodine	0.15 mg.	Thiamine Hydrochloride	2 mg.
Iron	3.33 mg.	Riboflavin	2 mg.
Manganese	0.33 mg.	Pyridoxine Hydrochloride	0.5 mg.
Molybdenum	0.2 mg.	Niacinamide	20 mg.
Magnesium	2 mg.	Ascorbic Acid	37.5 mg.
Phosphorus	187 mg.	Calcium Pantothenate	3 mg.

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QUESTION: Is abnormal hunger usually found in patients preceding an attack of Ménière's disease? Is extreme nervousness typical of this disease? Would an injection of 1 cc. of histamine be harmful? How frequently can histamine be given?

M.D., Illinois

ANSWER: *By Consultant in Otolaryngology.* A sensation of abnormal hunger preceding an attack of Ménière's disease is not customary. However, many patients with Ménière's disease do have considerable nervous tension, probably because of fear of an attack.

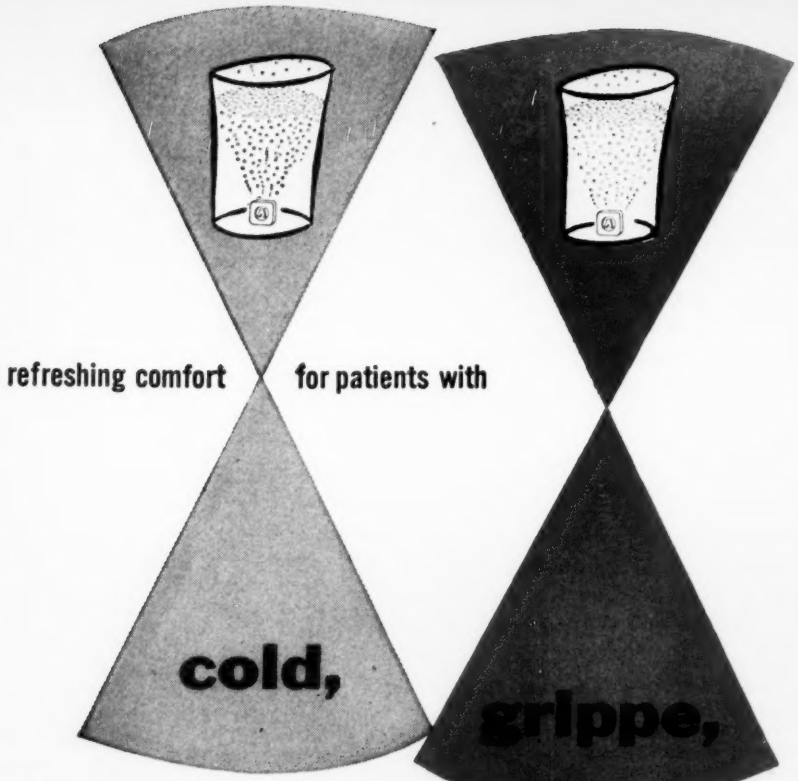
In a case of true Ménière's disease, 1 cc. of histamine probably would not have any real effect. Some patients seem to improve on this amount of treatment but some of the benefit is probably of a psychic nature. Histamine should not be harmful and could be given once a week without causing any trouble.

QUESTION: A 5-year-old child, bitten by a rabid dog, was given 21 doses of rabies vaccine by Semple's method. What immunity will this child have? How long will the immunity last?

M.D., West Virginia

ANSWER: *By Consultant in Immunology.* This question cannot be answered categorically. However, a fair degree of immunity is probably established a week or two after the completion of a two-week course of daily inoculations, reaching a height at four to five weeks. The antibody level, as measured by neutralizing and complement-fixing antibody titers, persists up to a year and perhaps longer.

Persons who have been vaccinated respond rapidly to revaccination and in such persons vaccine treatment, if used, should be limited to not more than 6 doses.



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Samples and literature upon request.

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*Lolli, G., and Smith, R.: New England J. Med. *235*:80 (July 18) 1946.

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Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: A New York statute permits disciplinary action against a licensed physician who "has been convicted in a court of competent jurisdiction, either within or without this state, of a crime." Were doctors' licenses subject to suspension because of convictions in a District of Columbia federal court for contempt of Congress for failing to produce before a committee financial books and records of the Joint Anti-Fascist Refugee Committee?

COURT'S ANSWER: Yes.

The New York Court of Appeals decided that the statute cannot be read as being limited to crimes committed against the laws of New York. Crime includes misdemeanors as well as felonies. The statute does not require that the crime be one of moral turpitude or related to professional practice.

Violation of a penal law bears upon a doctor's fitness to practice medicine. "A professional license is a high privilege and the State can attach to its possession conditions onerous and exacting. The special equities of individual cases can be reflected in variety of punishment, as was done here, but the choice is for the board, not the courts."

One of the seven judges of the Court of Appeals who reviewed the case dissented on the ground that the New York statute should not be applied to a case where violation of laws of another jurisdiction does not involve moral turpitude and is not shown to reflect adversely upon professional qualifications (111 N.E. 2d 222).

PROBLEM: A woman brought suit for abortion, and other women upon whom the accused doctor also had criminally operated were called as witnesses. These women were excused when they refused to testify on the ground that they might incriminate themselves. Was this circumstance ground for reversing a conviction?

COURT'S ANSWER: No.

The Iowa Supreme Court said that the privilege of refusing to testify was personal to the women, and that the doctor's attorney could not avoid calling them to the witness stand.

In line with what courts generally declare, the Supreme Court reasoned that evidence showing that accused committed, or attempted to commit, similar crimes is receivable for the limited purpose of presenting the probability of criminal intent in a particular case.

The disastrous tendency of having the other women parade to the witness stand and virtually admit that they had submitted to criminal abortion at the hands of the accused is obvious, although they did not testify (59 N.W. 2d 223).

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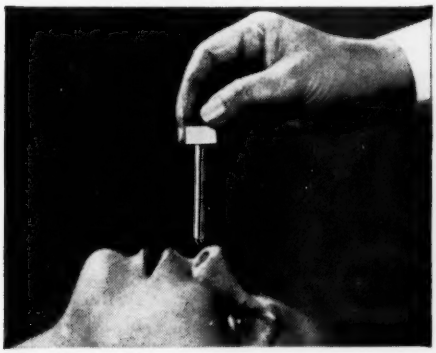
FURACIN NASAL
*plain • with ephedrine • with Neo-Synephrine**



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Literature on request

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*Neo-Synephrine is the registered trade mark of Winthrop-Stearns, Inc., for its brand of phenylephrine which is contained in this solution.

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Each suppository contains: ergotamine tartrate 2 mg. (1/32 grain) caffeine alkaloid 100 mg. (1½ grain) in a cocoa butter base.

Dose:

1 suppository at onset of attack.
Second 1 hour later if necessary.
No more than 3 per attack.

available in boxes of 12.

AS EFFECTIVE AS PARENTERAL

"... rectal suppositories have been found as effective as hypodermic injections, sometimes more effective, and always more convenient. Nausea and vomiting are minimal with rectal medication."

Friedman, A. P. & von Storch, T. J. C.: Neurology *1*: 6 (Nov.-Dec.) 1951.

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"Because of the ease of self-administration and guaranteed absorption in spite of gastrointestinal upset this agent [Cafergot suppositories] should become a worthwhile tool in our armanentarium, particularly since it sacrifices none of the potency of parenteral ergotamine."

Fuchs, M. & Blumenthal, L.: M. Ann. District of Columbia *21*: 7 (July) 1952.

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Bankoff, M. L.: J. Indiana M. A. *44*: 836 (Sept.) 1951.

FOR THE DIFFICULT PATIENT

"The suppository is preferable to the oral medication in severe cases, *even when nausea and vomiting are not encountered.*"

Kadish, A. H.: New England J. Med. *242*: 581 (April) 1950.

"Without exception . . . they [30 vascular headache patients] preferred the suppositories to other dosage form."

Anderson, J. R. & Rubin, W.: New Orleans M. & S. J. *104*: 578 (Aug.) 1952.

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"Physiologically, the rectal route is suitably adapted to rapid absorption because of the comprehensive blood supply to the rectum. Blood from the rectum is carried directly to the right auricle, thus circumventing the liver. The absorption from the rectum is fairly rapid. The drug reaches the inferior vena cava without encountering venous stagnation in the liver or bowel."

Reisman, E. E.: Am. Pract. & Digest Treat. *3*: 4 (April) 1952.

Mouth to Cerebral Vessels through STOMACH & LIVER

Cranial Circulation

Rectum to Cerebral Vessels avoids STOMACH & LIVER

SANDOZ

PROBLEM: In a malpractice suit which involved burns resulting from removal of warts from a patient's heel by roentgen treatment, was the doctor required to affirmatively disprove negligence?

COURT'S ANSWER: No.

This conclusion, reached by the North Carolina Supreme Court, was based upon expert medical testimony to the effect that, despite the exercise of the very best care, such burns sometimes occur. There was no evidence that the particular burn was of such a type that, in the ordinary course of things, it would not happen in the use of proper care.

The court cited legal authority to support its view that a doctor's responsibility for injuries resulting from roentgen treatment is tested by the same standards as apply to medical practice in general—use of the standard care and skill in diagnosis and treatment recognized in the community (76 S.E. 2d 461).

PROBLEM: Assuming that a psychiatrist at a medical center for federal prisoners falsely stated that inmate was paretic, psychotic, or insane, was the psychiatrist subject to suit for damages by the patient for libel or slander?

COURT'S ANSWER: No.

The U. S. Court of Appeals, Sixth Circuit, upheld dismissal of the inmate's suit (102 Fed. Supp.

(Continued on page 48)

CLINICAL STUDIES PROVE "TRILENE" ANALGESIA SAFE AND EFFECTIVE IN PEDIATRIC PRACTICE

Value of self administration is confirmed in surgery

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"Trilene," brand of highly purified trichlorethylene (Blue), is supplied in containers of 300 cc.

1. Stephen, C. R., Nowill, W. K., and Martin, R.: Anesthesiology *13*:646 (Nov.) 1952.

2. Pickrell, K. L., Stephen, C. R., Broadbent, T. R., Masters, F. W., and Georgiade, N. G.: Plast. & Reconstruct. Surg. *9*:345 (Apr.) 1952.

For further information on "Trilene" and the "Duke" University Inhaler (Model-M), please write to Ayerst, McKenna & Harrison Limited, 22 East 40th Street, New York 16, N. Y.

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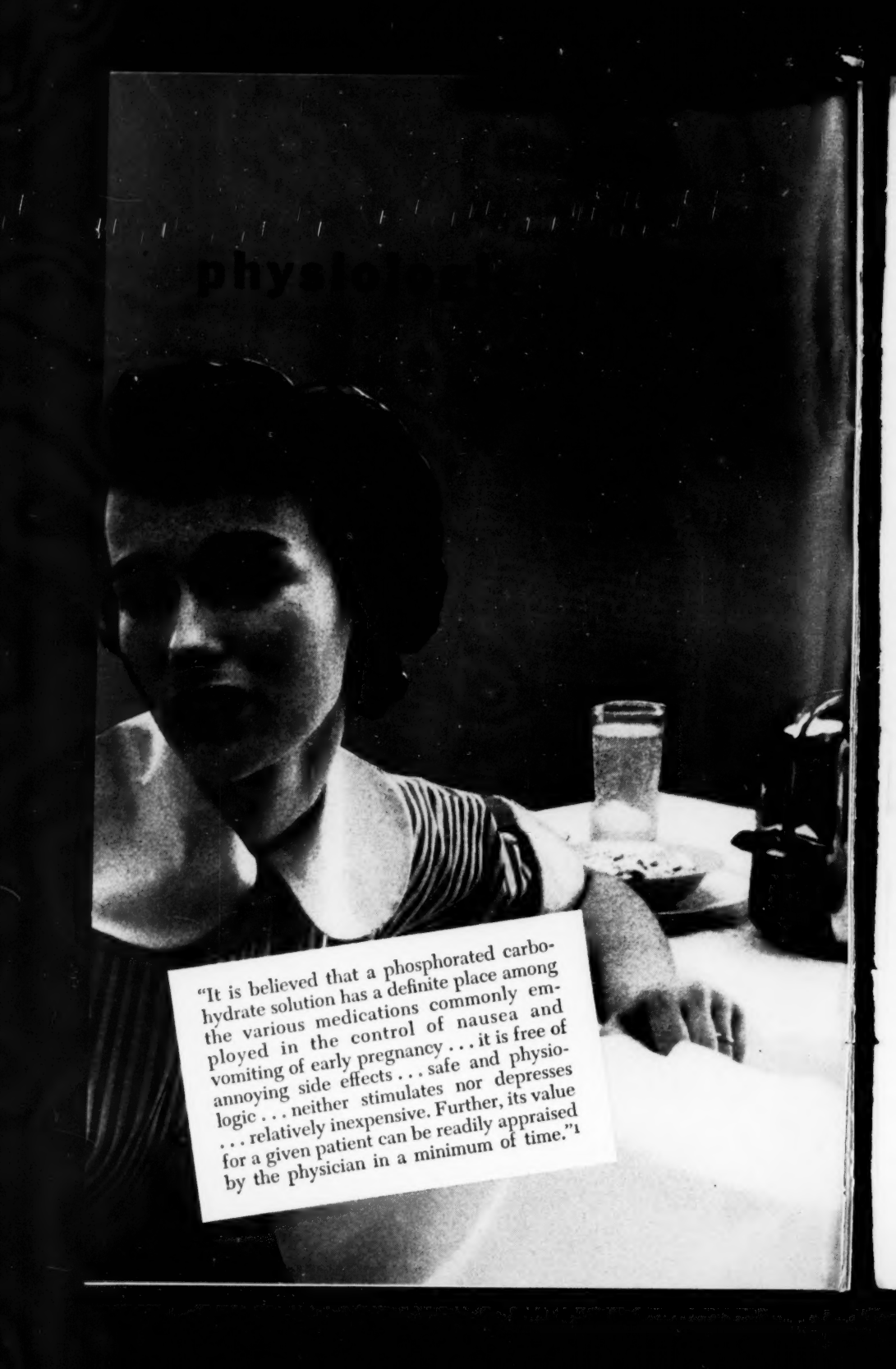
"It is believed that a phosphorated carbohydrate solution has a definite place among the various medications commonly employed in the control of nausea and vomiting of early pregnancy . . . it is free of annoying side effects . . . safe and physiologic . . . neither stimulates nor depresses . . . relatively inexpensive. Further, its value for a given patient can be readily appraised by the physician in a minimum of time."1

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IMPORTANT: EMETROL must *not* be diluted or followed by any liquids for at least 15 minutes.

SUPPLIED: Bottles of 3 fl. oz. and 16 fl. oz. through all pharmacies.

1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. 65:311, 1953.

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7) under the general rule that a public official is not liable for damages resulting from mistakes of fact made by him in the course of his duties, even when he has acted from ulterior motives (201 Fed. 2d 51).

PROBLEM: In a suit for malpractice, could liability of the doctor be declared on a theory that the patient would have received better treatment had the doctor ordered him moved to a hospital from his home?

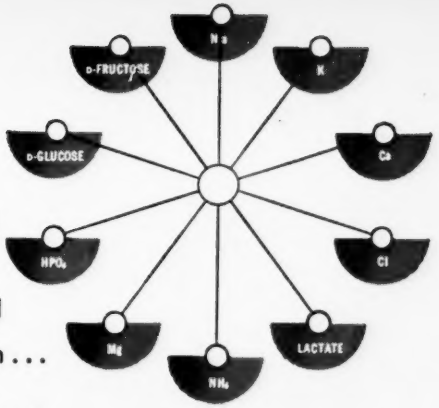
COURT'S ANSWER: No.

In a case involving blindness of a newly born infant, claim resulted from the doctor's failure to place a solution in the child's eyes. The Massachusetts Supreme Judicial Court observed that ordinarily a doctor can advise hospitalization but has no authority to order it (230 Mass. 201; 119 N.E. 773).

PROBLEM: A doctor sued, within due time, to enforce payment for his services. Could damages for malpractice be offset against his charges, although the statutory period for a malpractice suit had elapsed?

COURT'S ANSWER: Yes.

The Pennsylvania Superior Court decided that the outlawed claim for malpractice could be used as an offset but not as the basis for affirmative recovery against the doctor (99 Pa. Super. 30).



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▶ Travert 10%-Electrolyte No. 1	80.0	36.0	4.6	63.0	60.0	–	2.8	–	Travert 10%	Any
▶ Travert 10%-Electrolyte No. 2	57.0	25.0	–	50.0	25.0	–	6.0	12.5	Travert 10%	Any
▶ Travert 10%-Electrolyte No. 3	63.0	17.5	–	150.5	–	70.0	–	–	Travert 10%	Any
Ammonium Chloride 2.14%	–	–	–	400.0	–	400.0	–	–	–	IV
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M/6 Sodium r-Lactate	167.0	–	–	–	167.0	–	–	–	–	Any
▶ Travert 10%-Potassium Chloride 0.3% in Water	–	40.0	–	40.0	–	–	–	–	Travert 10%	Any
▶ Travert 10%-Potassium Chloride 0.3% in 0.45% NaCl	77.0	40.0	–	117.0	–	–	–	–	Travert 10%	Any

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PROBLEMS: A Texas statute provides for imposition of penalties and attorneys' fees against insurers who fail to pay just claims within thirty days after demand. Reports were sent by a hospital secretary to insurer covering itemized statement of services for which reimbursement was to be claimed. They were signed by the attending physicians, and on the back appeared a signed authorization by the insured patient for payment of the benefits to the hospital and to one of the doctors. [1] Did that constitute a demand for payment within the meaning of the statute? [2] Even if the documents be regarded as such demand, did right to make the demand expire when the patient died before filing of the documents?

COURT'S ANSWERS: [1] No. [2] Yes.

The Texas Court of Civil Appeals, Eastland, reasoned that the report of services rendered was not a demand for payment. The patient's authorization was power of attorney given the hospital and doctor to collect payments due under the policy, and was not so worded as to constitute an assignment. Powers of attorney are automatically revoked by death of the signer (256 S.W. 2d 1006).

PROBLEM: May a conviction of unlicensed medical practice rest upon a layman's testimony as to the nature of furnishings of an accused's office?

COURT'S ANSWER: Yes.

The Illinois Appellate Court, First District, Chicago, upheld a conviction on evidence that ac-

cused's office included a stethoscope, blood pressure apparatus, a physician's examining table, sterilizing cabinets, and so on (65 N.E. 2d 218).

The opinion recognizes that the average layman's knowledge concerning the use of such equipment may obviate need for expert testimony.—A.L.H.S.

PROBLEM: A physician carried liability insurance which covered autopsies and inquests. He was also county coroner and, in that capacity, ordered an autopsy. If he became liable for damages because the autopsy was illegally ordered, did the policy entitle him to indemnity?

COURT'S ANSWER: No.

A Missouri court of appeals decided that the policy was so worded as to indicate intent to cover him in his professional, not official, capacity (193 S.W. 343).

PROBLEM: The commanding officer of an Army hospital admitted a civilian hospital employee for treatment although she was not eligible for admission. Was the government liable under the federal Tort Claims Act for negligence of subordinate medical officers of the hospital in treating the patient?

COURT'S ANSWER: Yes.

So decided the U. S. District Court, Northern District of California, Southern Division. The court applied the general rule of law that an employer, under certain circumstances, may be bound by acts of a supervising representative committed within the course of employment, although outside actual authority conferred. Operation of the hospital was facilitated by the treatment of the injured employee (111 Fed. Supp. 162).

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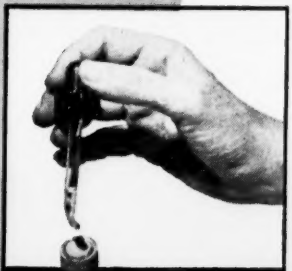
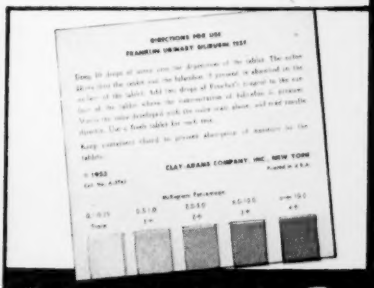


2. Add 2 drops of Fouchet's Reagent.



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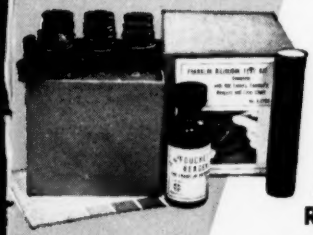

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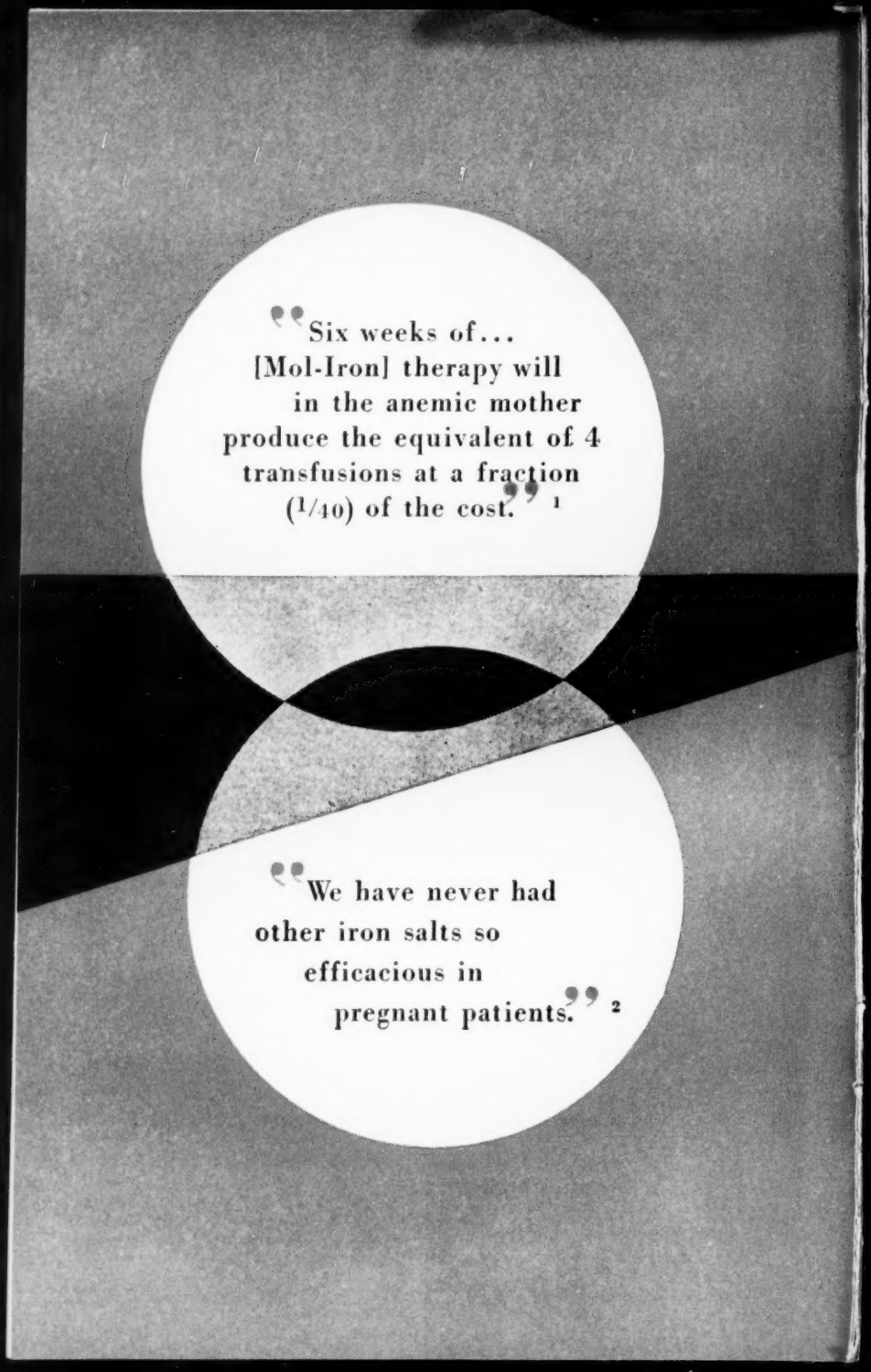
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1. Lund, C. J.: Studies on the Iron Deficiency Anemia of Pregnancy, Am. J. Obstet. & Gynec. 62:947-961 (Nov.) 1951.

2. Dieckmann, W. J., and Priddle, H. D.: Anemia of Pregnancy Treated with Molybdenum-Iron Complex, Am. J. Obstet. & Gynec. 57:541-546 (Mar.)1949.

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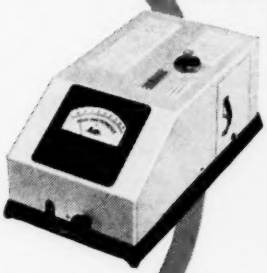

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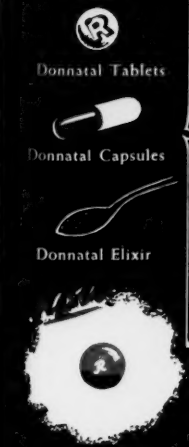

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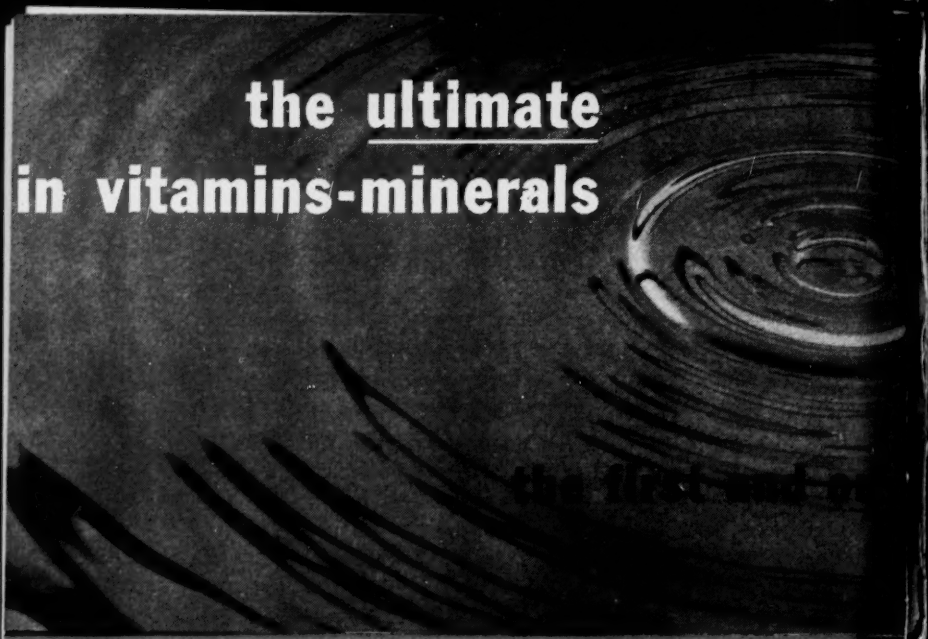

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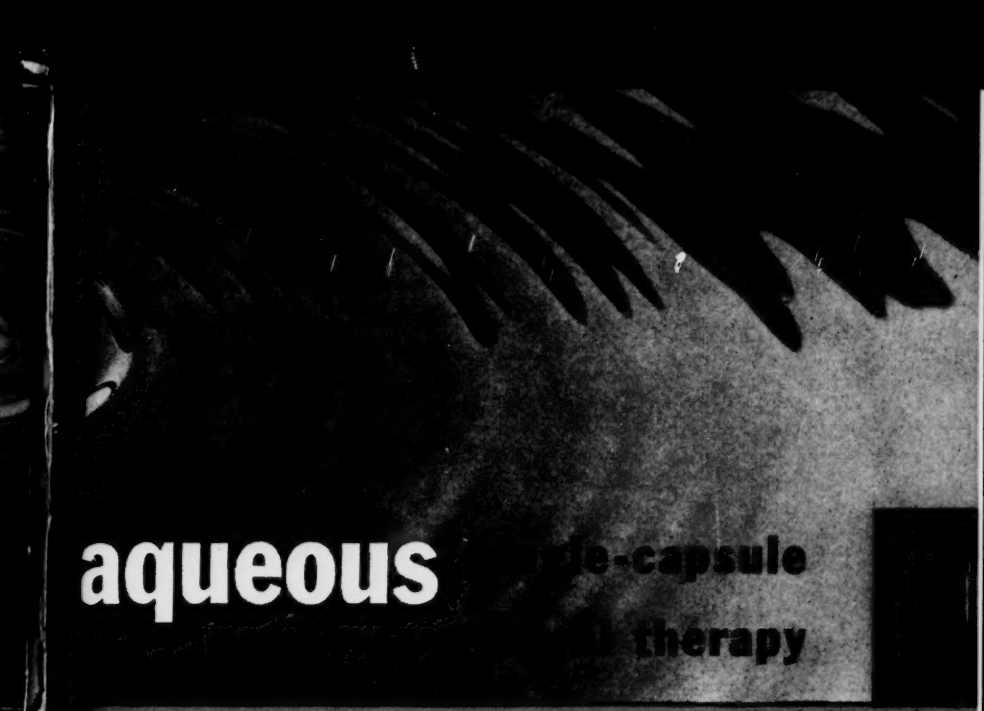

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Washington LETTER

Medical Fields Under Committee Investigation

IN this period of congressional vacation, the concept of government-by-commission-and-investigation is flowering. Without looking too carefully, 10 commissions or committees can be found intent on studies that directly or indirectly involve medicine. To a large extent, most of them are going over the ground that was plowed so vigorously, if not thoroughly, by the Magnuson commission just a year ago.

The two most massive investigations, and those with possibly the greatest long-range significance, are just now beginning to move into their tasks. These are the studies of the Commission on Intergovernmental Relations, under chairmanship of Clarence Manion, and the Commission on the Organization of the Executive Branch, under chairmanship of Herbert Hoover.

Although both groups will spend much time on medical affairs, neither has a doctor in its membership. Politicians and government officials outweigh any other groups, but liberal representatives are present from education and the insurance field.

"Stop saying, 'You're the doctor!'"

Neither commission, of course, has the authority to effect any changes, but considering that the Hoover Commission was named entirely by the President and the Manion Commission by the President and the Congress, their recommendations should be well received at the White House and on Capitol Hill.

The Manion Commission must finish work by next March 1, unless given a time extension by Congress. The Commission is looking into all relationships between the federal govern-

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ment and states and local governmental units. Much time will be spent studying federal grants in the medical fields, attempting to determine if the federal government can withdraw from any programs in favor of states. Particularly important to the medical profession are grants for care of crippled children and old-age relief cases, rehabilitation of the handicapped, control of venereal diseases, and general public health work. There is an implied agreement that if the federal government stops sending money to the states to help in this work, some federal taxes will be reduced or eliminated at the same time, so that the states can move in and collect the additional money needed. The Manion Commission will also look into such matters as highway grants, school lunches, and assistance to farmers.

The Hoover Commission immediately recognized the importance of federal medical plans by announcing that a special task force was beginning a study of all federal hospitals, medical services, and research programs.

This Commission will confine its work to investigations and recommendations in executive departments, including Defense Department, the Veterans Administration, and the Department of Health, Education, and Welfare, where medical expenses take up a high percentage of all appropriations.

Inevitably out of this investigation will come a revival of the old dispute over whether to unite all federal medical services, at least the hospital phases, in the interest of economy and better administration. In the old Hoover Commission this argument grew so heated that compromise was impossible, and 2 conflicting recommendations were presented. The suggestion for a united medical administration has been before Congress several times in the past but was opposed successfully each time. On the last occasion the principal opposition came from the American Legion and American Medical Association.

The Hoover group may be expected to make some suggestions regarding a scaling down of the Veterans Administration's care of non-service connected medical cases. The Budget Bureau has warned that if this activity is unchecked, the cost will be more than the federal tax structure can bear.

Even without these 2 commissions, there would be a surplus of dull and bulky reports for midwinter reading.

The House Interstate and Foreign Commerce Committee, after paying almost no attention to health matters while Congress was in session, became curious in the fall. Chairman Charles Wolverton first said that it was time to look into the government's research work, to learn if enough money was being

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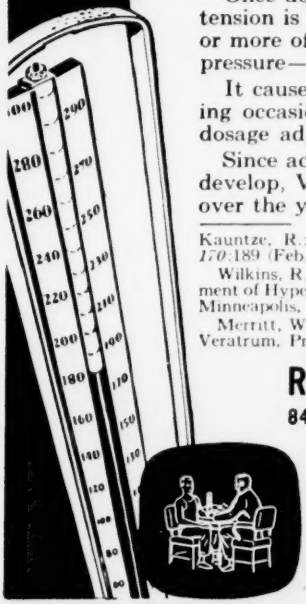

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Kauntze, R.: Veratrum and Its Derivatives, The Practitioner *170*:189 (Feb.) 1953.

Wilkins, R. W.: Recent Experiences with Pharmacologic Treatment of Hypertension, in Bell, E. T.: Hypertension, A Symposium, Minneapolis, University of Minnesota Press, 1951, p. 492.

Merritt, W. A.: The Treatment of Essential Hypertension with Veratrum, Proc. Staff Meet. Mayo Clin. *27*:481 (Nov. 19) 1952.

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appropriated or if some basic changes should be made. Then, before start of the hearings, Mr. Wolverton decided also to examine the status of voluntary health insurance plans. Thus that hearing, now concluded, took in almost the entire field of medical interest.

The Wolverton hearings gave research workers, who usually attract little attention, a chance to tell about their problems and to explain the obvious fact that if they had more money they probably could come up with more discoveries. Promoters of nongovernment research funds, such as those for cancer, heart disease, and poliomyelitis, also had an opportunity to describe their use of donations.

The sessions on voluntary health insurance were interesting but did not reach the peaks of past hearings when the proponents and opponents of national compulsory health insurance were allowed to debate in public.

After concluding a series of hearings during the summer, the House Veterans Affairs Committee staff continued quietly to assemble information in preparation for the next session, when pressure will be strong for a restriction of benefits.

Rep. Carl Curtis (R., Neb.), an authority on Social Security but no friend of the system, continued the work of his staff of digging through the entire Social Security structure. He is determined to come up with

some recommendations, even if the suggestions are not in favor at the White House. Inviting trouble from the Administration, Mr. Curtis may propose that the Old Age and Survivors Insurance law be extended next year, but that physicians, dentists, and other professional groups be allowed to remain out.

Within the Eisenhower family, another investigation is threatening trouble. This inquiry started with a demand by the Budget Bureau that the U. S. Public Health Service prepare its next budget without provision for the medical care of merchant seamen. Secretary Hobby of the Department of Health, Education, and Welfare countered by saying that she couldn't do that without also separating the costs of other federal beneficiaries who came to PHS from other departments for free medical care. She then immediately started a study to learn exactly who was getting what. At this stage it appears that Mrs. Hobby's strategy may succeed in saving the sailors.

Attracting little attention at this stage is the work of a committee in the Defense Department which is attempting to draw up legislation to extend and make uniform the care of military dependents—without unduly alarming private physicians, hospitals, and dentists.

Within Veterans Administration, a survey is under way to find an easy way of solving the segregation problem. President Eisenhower and his aids are telling VA to end segregation in hospitals and not to delay too long. The VA doctors, unless a magic formula can be found, fear such a change would stir up so much trouble that patient care would be affected, particularly in

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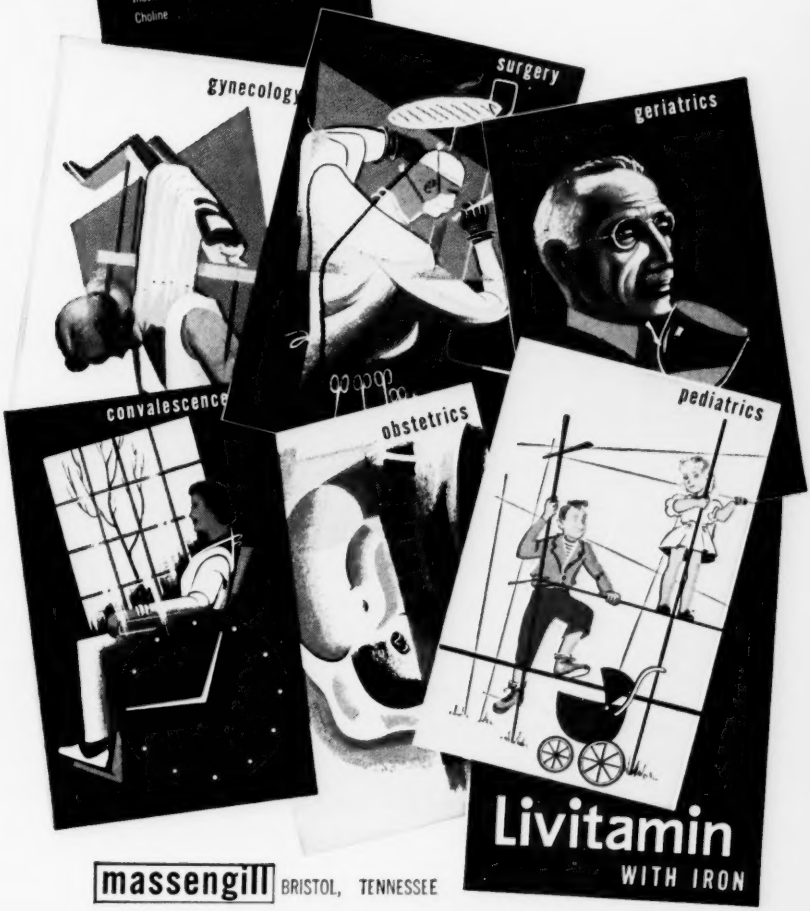

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the mental hospitals. So far, VA's official policy is that segregation will be ended "as soon as possible." The question is how long the White House will accept that as an excuse.

Rep. Carroll Reece (R., Tenn.) has a subcommittee—and an appropriation—to investigate tax exempt educational and philanthropic foundations, many of which are heavy contributors to the medical schools and to medical research. If another investigation is needed, Sen. Langer still has not completed his sympathetic study of osteopaths' problems. His main accomplishment so far has been to give a few osteopaths an opportunity to testify that they are being discriminated against by the medical profession.

Washington Notes

¶ Secretary Hobby has given fairly plain warning that whether or not the doctors like the idea, the administration will press next year to bring them and 10,000,000 or so other persons under Social Security coverage.

¶ A Public Health Service survey that started with the title "Union Health Plans" wound up with the title "Management and Union Health Plans."

¶ The Eisenhower administration has worked out a plan for a gradual reduction in federal contributions to states for vocational rehabilitation, although retaining the concept of encouraging the states to spend more in this direction.

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*Rehfuss, M. E.: Indigestion, Philadelphia, W. B. Saunders Co., 1943, p. 322

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Portis reported these fatigue states were aggravated when the patients consumed beverages and foods that contained free sugar. He further stated that while these raise the blood sugar level momentarily, their "free" sugar is burned up too quickly, and a greater letdown follows. On the basis of this evidence a diet high in proteins and relatively high in carbohydrates in a complex form was given to his patients. He found such foods as milk are especially beneficial because they are digested more slowly, and because they maintained the blood sugar level for a longer period.

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*Portis, Sidney A., Life Situations, Emotions and Hyperinsulinism, J.A.M.A. **142:** 1281-1286 (April 22) 1950.

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MODERN MEDICINE
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THE EDITOR'S PAGE

by WALTER C. ALVAREZ, *Editor-in-Chief*

Hyperglycemic Glycogenolytic Factor of the Pancreas

For years physiologists have puzzled over many peculiar things about diabetes and insulin. For instance, total removal of the pancreas in man does not produce as severe a diabetes as often comes spontaneously. Also, there is something in ordinary insulin preparations which causes a preliminary rise in blood sugar. When Abel first crystallized insulin he found that this stimulating factor was gone; later, when Scott crystallized insulin with another technic, he found that his crystals contained the stimulating factor.

Dr. Chr. de Duve of Belgium has written a fine summary of our present-day knowledge in regard to this other hormone, which in the last five years has been isolated and to some extent purified by several workers. There is good evidence to indicate that it is the secretion of the alpha cells of the islands of Langerhans. The beta cells produce insulin.

Glucagon is a polypeptide similar to insulin, but in some ways different. It counteracts the effects of insulin much as adrenaline does, but in chemical structure it differs greatly from adrenaline. Its production is stimulated by a growth hormone in the pituitary gland, and this throws additional light on the long-known relation between the pituitary and diabetes. As one might expect, alloxan, which destroys the beta cells, does not destroy the alpha cells and hence does not affect the secretion of glucagon. The giving of cobalt will, to some extent, knock out the alpha cells but does not destroy them entirely.

The question now arises as to whether there is a disease due to the failure of development of the alpha cells. Apparently,

there is. In 1950, McQuarrie and his colleagues at the University of Minnesota described the occurrence in children of certain families of a peculiar type of hyperglycemia during the first month of life. This condition responded to treatment with ACTH and was found to be associated with a total or almost total absence of the alpha cells in the pancreatic islands.

Evidently, then, physicians must now recognize a new gland of internal secretion with a new disease due to the failure of development of the gland. We can now suggest why a man who has to part with all of his pancreas will not have as severe diabetes as has a man who has lost only his beta cells. With a pancreatectomy the man loses both his insulin and his glucagon.

Roentgen Studies and Backache

I have always wondered when examining a person with backache and an unusually acute lumbosacral angle if this congenital peculiarity could have anything to do with the low back pain. The association certainly appears to be more than coincidental.

Therefore it is good to find a statistical study of the subject by Clarence A. Splithoff (*J.A.M.A.* 152:1610-1613, 1953). He concludes that the several congenital anomalies of the lumbosacral joint are found just as often in normal persons as in persons with backache. Other orthopedists in the past have reached similar conclusions. The man with the most extreme spondylolisthesis I ever saw had no backache.

Heberden's Nodes

Many physicians will be interested in a report by Drs. Robert M. Stecher, A. H. Hersh, and Harry Hauser of Cleveland. They have found that Heberden's nodes occur in families. The nodes can be recognized early by the appearance of small islands of bone in the extensor tendons near the distal phalanges. The writers believe that this type of osteoarthritis of the finger joints is independent of other forms of arthritis.

The condition is not associated with obesity and hypertension, but is related to the menopause. Curiously, it develops only when the nerve supply to the hand and fingers is normal. The inheritance is dominant in women and recessive in men.

A plea is made for greater use of laboratory facilities to avoid misuse of the antibiotics.

Bacterial Resistance to Antibiotics

FRANK L. MELENEY, M.D., AND BALBINA A. JOHNSON
Columbia University, New York City

TO curb the increasing resistance of organisms to antibiotics—the result of indiscriminate use—laboratory tests should be made whenever possible to determine the causative organisms of a particular infection and the sensitivity of those organisms to available antibiotics. The physician may then employ the most potent antibiotic or combination of antibiotics in therapy.

Without laboratory help, no clinician, however experienced, can tell when bacteria are going to succumb to treatment with any of the antibiotics, declare Frank L. Meleney, M.D., and Balbina A. Johnson. Often an organism that is susceptible at the beginning of treatment becomes resistant later.

Bacterial resistance to antibiotics after exposure to the drugs can be demonstrated with every antibiotic and every bacterial species yet studied. The more any antibiotic is used, the more readily do bacteria of all types develop resistance. The progeny of these bacteria, propagating that resistance, fail to respond to treatment with the antibiotic.

The development of this phenomenon can be largely attributed to inadequate dosage, empirical application, and general misuse of antibiotics. With penicillin in particular, great harm is done by physicians who prescribe single injections for nonspecific infections. Furthermore, building up a resistance to one broad-spectrum antibiotic will develop resistance to another, especially in the case of aureomycin and Terramycin.

The medicated disk method of determining sensitivity is preferred because of simplicity, rapidity, and consistency. By this method either the exudate or a small amount of broth in which the specimen is suspended is smeared evenly over the surface of a blood agar plate. Disks saturated with an antibiotic are then placed on the surface of the agar. At least 4 or 5 or as many as 9 different substances may be tested against the culture.

After overnight incubation, some qualitative indication of the sensitivity of the organism is evident from the width of the zones of growth inhibition.

The results obtained with the following concentrations of antibiotics in vitro correspond accurately with the effects observed by the usual upper safe limit of dosage of the antibiotics: penicillin 10 units, bacitracin 40 units, Terramycin 100

The clinical significance of the increasing resistance of organisms to the antibiotics. Surg., Gynec. & Obst. 97:267-276, 1953.

μg., and neomycin and streptomycin 250 μg. each per 1 cc. of solution. Filter paper disks, with a ½-in. diameter, are used to absorb 0.1 cc. of the antibiotic solution.

The drug to which the culture is most susceptible is the one used for treatment of the patient. If the culture contains a mixture of organisms, as will often happen with a surgical infection, 2 antibiotics may be needed. If the culture is resistant to the above antibiotics, secondary tests are done with aureomycin, Chloromycetin, polymyxin, and Erythromycin. If the culture is resistant to these drugs also, the inhibiting concentration for each may be determined by dilutions from 100 to 250 units or micrograms downward in fluid media.

Frequently synergism is demonstrated between 2 or more antibiotics. In this case, fractions of the smallest inhibiting concentration, when combined, will inhibit the growth of the organism.

Commercially prepared disks are available for small hospital laboratories where tests are infrequent. In large hospitals the practice of making up the antibiotic dilutions at the hospital is more economical and satisfactory.

Cavernous Sinus Thrombosis

WILLIAM H. RATTNER, M.D., AND JOHN TYTUS, M.D.

PROMPT and judicious use of antibiotics will save most patients with cavernous sinus thrombosis, a once almost invariably fatal disease. Most such infections are caused by staphylococci, strains of which vary considerably in sensitivity. Therefore, careful bacteriologic studies are necessary to determine the correct medication.

William H. Rattner, M.D., and John Tytus, M.D., of the University of Michigan, Ann Arbor, describe a typical case seen at the University of Michigan Medical School, Ann Arbor.

Before the isolation of an organism, vigorous antibiotic therapy with a wide spectrum of agents was initiated, including sulfadiazine, penicillin, streptomycin, and aureomycin. A coagulase-positive staphylococcus being isolated, as is common, large doses of both penicillin and aureomycin were given. Although 60% of strains of pathogenic staphylococci are resistant to penicillin, few are resistant to both these agents. In this instance, the organism being most sensitive to penicillin, 25,000,000 units daily of penicillin were administered, 15,000,000 units intramuscularly and 10,000,000 units intravenously.

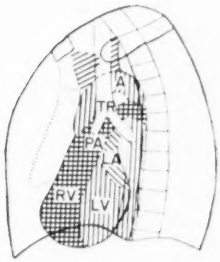
The patient recovered. No untoward effects were noted from the massive doses of penicillin.

Cavernous sinus thrombosis: a review of the literature, and report of a case with recovery. Univ. Michigan M. Bull. 19:114-121, 1953.

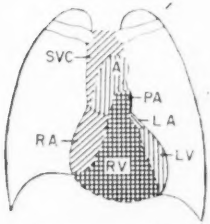
Office Diagnosis of Tetralogy of Fallot

ROBERT TIDWELL, M.D., ROBERT RUSHMER, M.D.,
AND ROBERT POLLEY, M.D.
Seattle

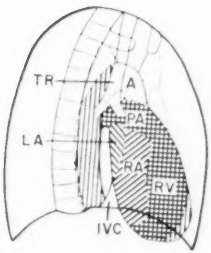
NORMAL
Fluoroscopic Appearance



Left anterior oblique



Anteroposterior



Right anterior oblique

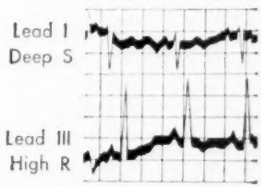
TETRALOGY OF FALLOT

Marked cyanosis and clubbing

Heart size normal; systolic murmur

Fluoroscopic examination; pale lung fields with concave pulmonary conus; pulmonary window in left anterior oblique

EKG strong right axis

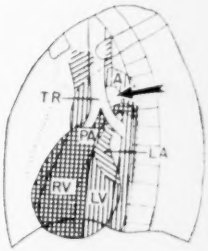


Red blood cell count, 6.3 million; hematocrit 60.

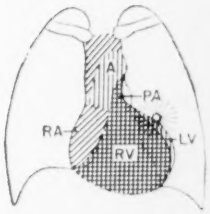
KEY

TR—trachea
A—aorta
PA—pulmonary artery
LA—left auricle
RA—right auricle
LV—left ventricle
RV—right ventricle
IVC—inferior vena cava
SVC—superior vena cava

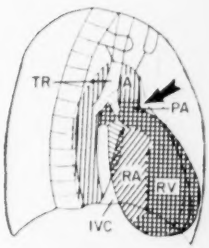
Fluoroscopic Appearance



Left anterior oblique



Anteroposterior



Right anterior oblique

The office diagnosis of operable congenital heart lesions. Northwest Med. 52:635, 1953.

Methods for control of diabetes vary with the severity of the condition as determined by variable factors.

Treatment of Diabetes

ARTHUR R. COLWELL, M.D.
Northwestern University, Chicago

ONCE the severity of diabetes is correctly determined, balanced management can maintain adequate nutrition and metabolic equilibrium in the vast majority of cases.

The severity of the disease is only roughly proportional to the amount of insulin required. The true gauge, according to Arthur R. Colwell, M.D., is the individual's homeostatic reserve, the ability to adjust automatically to intake of sugar and related substances. Important in estimating severity are the following considerations:

Ease and speed of glycosuria and acidosis—The rapidity and ease with which glycosuria and acidosis occur are usually proportional to the ease with which insulin reactions can occur and the violence of the resulting shock. These behavior traits are probably the most reliable indicators of severity.

Weight—Thinness accompanies severity, except in young patients who are taking large amounts of insulin and overeat.

Age of patient at onset and duration—Severity is most likely when diabetes starts in a young person or has lasted a long time.

Intensity of symptoms and signs without treatment—A good indication of severity is obtained from the rate of weight loss without restricted diet, amounts of diuresis and thirst, incidence of ketogenic acidosis, and blood and urine sugar levels in relation to the food eaten.

On the basis of treatment, diabetic patients may be classified into two groups of about equal size—those who require insulin and those who do not (see chart).

Mild diabetes, controllable by diet alone, occurs most often among elderly, obese individuals. At the outset, the diet should be planned to reduce excess weight as well as accomplish desugarization. Undernutrition for short periods is not usually harmful. Use of insulin for desugarizing is not advisable unless stability at hyperglycemic levels occurs. In the latter case, insulin should be used temporarily at least.

Most patients requiring insulin have *moderate* involvement. These persons are usually elderly, but moderate diabetes also occurs in early cases in the very young. Fasting blood glucose ordinarily does not exceed 300 mg. per cent, and glucose excretion is not above 50 gm. daily. Control is usually accomplished by 1 daily dose of protamine zinc insulin.

In this category also are placed individuals with diabetes of slight

Treatment of diabetes. Diabetes 2:262-267, 1953.

VARIETIES OF DIABETES AND THERAPEUTIC METHODS

	Severity	*Characteristics*	*Treatment*
Manageable by diet	Mild (40 to 50% of total cases)	Elderly patient Obesity Symptoms absent or negligible	Desugarization by diet restriction Weight control No insulin, or temporarily at most
Requires insulin	Moderate (20 to 30% of total cases)	Onset middle life or later but sometimes in early stages in young patients Long duration of diabetes in adults	Any depot insulin in moderate dosage Patients insensitive to insulin may require large dosage
	Severe (10 to 20% of total cases)	Many juveniles Responsive to minor influences Balance shifts easily	Intermediate insulins once daily (globin, NPH, and mixtures)
	Labile (10 to 20% of total cases)	Mostly children and juveniles, some adults Chronic infections Acidosis on slight provocation Sensitive to insulin, with unpredictable reactions	Intermediate insulins twice daily Some glycosuria condoned Interval feedings Avoid reactions Watch for ketonuria
Acute complications (possible in all cases)	Acute infections Acidosis—any degree Trauma Surgery Other acute illness		Plain insulin Frequent injections Frequent tests to determine response No reliance on depot insulins

degree but who are quite insensitive to the action of insulin. These patients need fairly large amounts of insulin.

Patients with *severe* diabetes are usually younger and thinner and have had diabetes longer than those with moderate involvement. In severe cases, slow-acting insulin results in heavy glycosuria after meals even though hypoglycemia may occur during fasting. Quick-acting insulin results in high blood and urine sugar levels before and after breakfast, and insulin reactions occur during the day, especially at the time of peak action of the insulin used.

Therefore diet, exercise, and insulins such as a globin insulin with zinc, NPH insulin, and thoroughly mixed combinations of plain and protamine insulin must be regulated to achieve control on a single daily dose.

Labile diabetes is the most severe form and usually develops eventually in all who have diabetes when very young. Waves of glycosuria with ketonuria, or of hypoglycemia and severe insulin shock are apt to occur without evident cause.

Even with insulin, such patients cannot be kept sugar free without danger of severe insulin shock. Therefore, in these cases glycosuria may be condoned. Also, carbohydrate intake should be higher than in the previous groups to replace glucose lost and to forestall reactions.

The most accurate control is by unmodified insulin every six hours day and night. Such a regime is intolerable, so a compromise is made, regular insulin being mixed with a depot insulin twice a day.

When *acute illness* intensifies diabetes, treatment is by unmodified insulin at least every six hours with frequent tests to regulate dosage. A depot insulin, if previously used, should be resumed without change of dosage when the acute illness has subsided and good control has been secured.

Coronary Sclerosis after Oophorectomy

JOHN H. WUEST, JR., M.D., THOMAS J. DRY, M.B., AND JESSE E. EDWARDS, M.D.

THE degree of coronary sclerosis in bilaterally oophorectomized women is greater than in uncastrated women, but less than in men. Therefore, John H. Wuest, Jr., M.D., Thomas J. Dry, M.B., and Jesse E. Edwards, M.D., believe that ovarian hormones exert at least one of the various influences in the development of atherosclerosis. Findings are based on a study at the Mayo Clinic, Rochester, Minn., of 49 hearts obtained from bilaterally oophorectomized women compared to 600 hearts from uncastrated women and 600 hearts from men of comparable ages.

The incidence of severe atherosclerosis is 10 to 45% greater in oophorectomized women than in other women of like ages. The anterior descending branch of the left coronary artery is the site of predilection for severe atherosclerosis among the oophorectomized persons.

Although the greatest degree of atherosclerosis is found in the proximal segment of each main coronary arterial division in most hearts, in 25% of the bilaterally oophorectomized women greater atherosclerosis was found in the middle or distal segments than proximally.

The degree of sclerosis in hypertrophied hearts of oophorectomized women is greater than the sclerosis in heavy hearts of noncastrated women. In oophorectomized women, the degree of sclerosis does not vary greatly with the nutritional state; in other women, sclerosis is less in undernourished cases.

The degree of coronary atherosclerosis in bilaterally oophorectomized women. Circulation 7:801-809, 1953.

Cardiac catheterization is needed to diagnose an atypical ductus without a right to left shunt.

Atypical Patent Ductus Arteriosus

HERBERT HULTGREN, M.D., ARTHUR SELZER, M.D., ANN PURDY, M.D., EMILE HOLMAN, M.D., AND FRANK GERBODE, M.D.
Stanford University, San Francisco

IN older children and adults, patent ductus arteriosus with pulmonary hypertension may exist with few or none of the usual diagnostic features.

Diagnosis of uncomplicated patent ductus arteriosus is ordinarily based on the following: [1] a continuous murmur in the pulmonic area, [2] an increased pulse pressure, [3] lack of electrocardiographic evidence of right ventricular hypertrophy, [4] no cyanosis, and [5] roentgen indications of left ventricular dilatation with dilatation and active pulsation of the pulmonary arteries. Cardiac catheterization is only rarely needed for diagnosis.

The most common feature of atypical patent ductus arteriosus is the lack of a continuous murmur, note Herbert Hultgren, M.D., Arthur Selzer, M.D., Ann Purdy, M.D., Emile Holman, M.D., and Frank Gerbode, M.D.

The syndrome may occur with a reversed right to left shunt and simulate chronic congenital heart disease with cyanosis or may have the usual shunt and an enlarged right ventricle.

Dyspnea from exertion is the most frequent symptom noted by the patient. This is not associated with orthopnea or nocturnal dyspnea except in terminal heart failure. A sensation of abnormal fatigue or weakness from exertion, substernal pain intensified by exertion, and nausea and vomiting may occur.

The pulmonic second sound is loud and may be accompanied by a shock. A blowing diastolic murmur along the left sternal border, probably a Graham Steell murmur, and a pulmonic systolic murmur are sometimes heard. In some cases no murmur is detected.

In patients with right to left shunts, the blood pressure is normal and no unusual carotid artery pulsations are noted; in patients with predominant left to right shunts, the blood pressure is elevated and prominent carotid artery pulsations are felt in the neck.

Roentgenograms show enlargement of the right ventricle and prominence of the pulmonary artery and branches. Electrocardiograms indicate right ventricular hypertrophy or, in some noncyanotic patients, hypertrophy of both the right and left ventricles.

The results of cardiac catheterization are characteristic for the

The syndrome of patent ductus arteriosus with pulmonary hypertension. Circulation 8:15-35, 1953.

noncyanotic cases and establish the diagnosis. With reversal of the shunt the diagnosis is more difficult. The difference of oxygen contents between the right ventricle and the pulmonary artery may be small. With a prominent degree of functional pulmonic insufficiency, the oxygen content of blood samples removed from the outflow tract of the right ventricle may be high and incorrectly suggest an interventricular septal defect. If, in addition, only femoral blood samples are obtained, the erroneous diagnosis of Eisenmenger's syndrome may be made. Simultaneous withdrawal of samples from the brachial and femoral arteries before and after exercise will prevent such errors.

The basis of the syndrome is probably an elevation of the anatomic resistance of the pulmonary vascular bed with a resultant increase in pulmonary artery pressure. The cause of the increased resistance is not known; but thrombosis with recanalization and, in one instance, a diffuse arteritis have been demonstrated. In some cases the disease may have existed since birth.

Surgery appears to be beneficial in cases with a left to right shunt but ligation may be dangerous or fatal for patient with reversed shunts.

ECG Reversal to Normal after Exercise

HENRY H. KALTER, M.D.

In coronary artery disease with angina pectoris, electrocardiographic abnormalities seen when the subject is at rest may be temporarily reduced or eliminated by an exercise tolerance test.

Improvement may be caused by transient increase in the myocardial blood flow and oxygen supply, surmises Henry H. Kalter, M.D., of New York Polyclinic Medical School, New York City, who describes 4 instances of unexpected reversal after activity, all associated with normal heart size.

Resting electrocardiograms were made in sitting and recumbent positions to exclude postural changes. After 20 knee bends performed in one and a half minutes, recumbent records were obtained.

Some changes were abolished, others merely modified. In 1 instance, for example, RST transitions were initially depressed in leads I and V_5; T waves were semi-inverted in lead I, diphasic and low amplitude in lead V. After exercise, RST transitions became isoelectric and T waves normal. In another case, RST transitions were initially isoelectric and T waves inverted in leads II and III. T_2 became upright and T_3 less inverted.

Reversal to normal of abnormal resting electrocardiograms following exercise tolerance tests in patients with coronary artery sclerosis and angina pectoris. New York State J. Med. 53:1548-1550, 1953.

Some clinical pointers may raise suspicion of neoplasms of the head or tail of the pancreas.

Pancreatic Carcinoma: Body and Tail

CHRISTOPHER STRANG, M.D., AND JOHN N. WALTON, M.D.
Royal Victoria Infirmary, Newcastle upon Tyne, England

WHEN weakness, exhaustion, abdominal pain, and thrombotic manifestations occur, the possibility of cancer of the body and tail of the pancreas should be considered.

The lesion is notoriously hard to recognize while still amenable to surgery because of the wide variety of clinical manifestations and lack of specific laboratory diagnostic methods. Diagnosis is usually made by either abdominal laparotomy or autopsy, but Christopher Strang, M.D., and John N. Walton, M.D., from a study of 58 cases, suggest several clinical features helpful for early diagnosis.

Carcinoma of the head of the pancreas is about 3 times as common as that of the body and tail. The latter condition is relatively rare, being reported as 2.3 cases in 1,000 autopsies, the greatest incidence being in the sixth decade. The duration of symptoms before entering the hospital is usually about four and one-half months.

Abdominal pain is the earliest and most prominent symptom of carcinoma of the body or tail of the pancreas. The pain is usually epigastric in location, frequently radiating to the back but not often to the left side, and is usually dull and intermittent, although occasionally severe. The pain is often worse at night but does not have the typical features of peptic ulcer pain and may or may not be relieved by change in position.

Subjective weakness and exhaustion are felt much earlier than with other intraabdominal malignant diseases. Anorexia and severe weight loss may also be early symptoms. Vomiting will occasionally occur. Chronic constipation is quite common and may be obstinate. Gastrointestinal bleeding from infiltration of the tract is frequent but usually appears late and, therefore, is not helpful for early detection.

In contradistinction to cases with cancer of the head of the pancreas, jaundice is uncommon and, if occurring, is late and, like ascites, indicates metastasis. Anemia is not common. An abdominal mass is usually not palpable until the disease is beyond possibility of effective aid.

The concomitant appearance of multiple thromboembolic manifestations with the above symptoms and signs should raise suspicion of pancreatic cancer. The relationship between multiple thrombosis and carcinoma of the pancreas is not clear but, possibly, tumor cells with mucoid changes may produce a clot-promoting substance. Also pos-

Carcinoma of body and tail of pancreas. Ann. Int. Med. 39:15-37, 1953.

tulated is the likelihood that thrombocytosin, a by-product of tumor necrosis, which increases adhesiveness of platelets, together with the augmented production of pancreatic lipase may cause intravascular platelet coagulation and thereby promote clotting.

The various psychiatric manifestations of carcinoma of the pancreas may be a clue to the diagnosis, yet are apt to be considered indications of a functional disorder. Anxiety, sleeplessness, agitation, and depression may easily mislead the physician. Hysteria may be considered because the pain seems exaggerated, inconsistent, bizarre, or relieved by suggestion.

Pathologic studies indicate that the signs and symptoms do not vary significantly with the site of the neoplasm within the pancreas. Metastases occur most commonly in the regional nodes, liver, omentum, gastrointestinal tract, adrenals, and bones.

Laboratory examinations that may aid in diagnosis include urinary diastase, serum amylase, blood lipase, secretin test, stool examination for free or excess undigested fat and protein, and a barium meal with particular attention to the position and shape of the stomach and the relations of the duodenum. Laparotomy may finally be necessary for diagnosis.

Antibiotics and Black Tongue

W. TOMASZEWSKI, M.D.

THE same drugs that produce black tongue can be used to cure the condition.

W. Tomaszewski, M.D., of the University of Edinburgh, Scotland, reports that prolonged local application of antibiotics to the normal tongue produces first a black tongue and, later, as treatment is continued, the black coating completely disappears and the tongue is red, smooth, and tender. Local antibiotic therapy, therefore, can be used to treat idiopathic black tongue. After treatment is begun, the pigmentation deepens for the first few days, then the drugs facilitate the removal of the hairs—hypertrophied filiform papillae.

Parenteral antibiotics have no effect on the condition.

Discoloration of the tongue occurs in about 10% of patients given systemic chloramphenicol or aureomycin, usually after one week of treatment. Local application of antibiotics causes discoloration of the tongue in 40% of persons, usually in the first three to five days of treatment. No special type of bacteria or fungi is of significance in the etiology of black tongue, whether the condition occurs spontaneously or as result of antibiotic therapy.

Incidence of black tongue in antibiotic treatment. Brit. M. J. 4822:1249-1251, 1953.

Careful hematologic study is needed in vascular disease so that polycythemia vera will not be missed.

Vascular Factors in Polycythemia Vera

MALCOLM B. BURRIS, M.D., AND W. R. ARROWSMITH, M.D.
Tulane University, New Orleans

THE incidence of thrombotic and hemorrhagic complications in cases of polycythemia vera is unusually high. For the small number of patients who have this insidious systemic disease as an underlying factor of vascular problems, Malcolm B. Burris, M.D., and W. R. Arrowsmith, M.D., find that special modifications in management are required.

The degree of elevation of the formed elements of the blood does not appear to have any direct relationship to the incidence of vascular complications. Many patients with greatly increased red cell and hemoglobin values have vascular complications, but so do others with fairly normal blood levels or whose polycythemia is controlled with venesection. On the other hand, many with excessively high hemoglobin concentrations escape vascular involvement. The elevation of the formed elements and the thrombotic episodes are apparently unrelated manifestations of polycythemia vera, although an augmented hematocrit volume with consequent increased viscosity of the blood may increase the clotting tendency.

In treating the vascular disease, surgical procedures are avoided in favor of local measures, anticoagulants, and therapy for the polycythemia. Prudent venous ligation and sympathetic blocks are indicated. More radical steps such as sympathectomy should be deferred until absolutely necessary because of the increased stimulus to thrombosis created by major surgery. Improvement beyond expectation is uniformly observed with this regimen even when toes are gangrenous.

Radioactive phosphorus as well as venesection should be used in all cases of polycythemia vera and seems to be effective in controlling the thrombotic tendency.

Among 68 adult patients with proved polycythemia vera, vascular complications were found in 23, all but 3 of whom were men. Of the 23 vascular patients, 8 had thrombophlebitis, for the most part with no antecedent trauma.

Another 5 of the polycythemia vera patients had peripheral arterial disease, mostly with signs of arterial thrombosis in the legs and feet; another 5 patients had cerebral thromboses, which in such cases may be confused with brain tumor; 3 had myocardial infarction; 2 young adults had thrombosis of the hepatic vein. Thrombosis developed in only 4 cases following treatment with P_{32}.

Vascular complications of polycythemia vera. S. Clin. North America 33:1023-1028, 1953.

Filtration of tobacco smoke decreases vasoalterative effects, especially for women smokers.

Circulatory Effects of Cigaret Smoke

MORRIS T. FRIEDELL, M.D.
Loyola University, Chicago

THE nicotine content of inhaled tobacco smoke affects the peripheral circulation of approximately 4 out of 5 persons who smoke. From 2.5 to 3 mg. of nicotine is absorbed from the lungs when a standard cigaret is smoked. Since many persons do not inhale, the lack of change in the peripheral blood volume in some cases may be due to the method of smoking rather than a lack of sensitivity.

By intravenous administration of radioactive iodinated human serum albumin and a scintillation counter, Morris T. Friedell, M.D., observed the effects of cigaret smoke on the peripheral vascular system. The test was confined to the smoking of 1 cigaret, since once the vasoconstriction or vasodilatation has occurred, further effects from smoking an additional cigaret rarely appear until recovery is complete. Greatest response is noted eight to ten minutes after the start of smoking.

Of the 100 persons with presumably normal circulation tested, 79 were sensitive to cigaret smoke. When the mineral type of filtered cigaret was used, 1 out of 3 persons showed no response to the smoke.

The degree of sensitivity to smoke was reflected in the alteration of radioactivity, the rapidity of onset, and the length of time before recovery.

Apparently women are more sensitive to nicotine and other tobacco products than men. The greatest degree of alteration in blood volume in sensitive men averages 19%, whereas, in women who respond, the degree of alteration is approximately 33%. When a filtered cigaret is smoked, men show a 10.7% change, while women show a change of 20.5%.

In spite of the greater sensitivity of women to smoking, some types of peripheral vascular diseases in which the vasoconstrictive effects of smoking are supposedly a cause are less common among women. Although Buerger's disease is rare in women, Raynaud's disease and other labile vascular diseases are more common in women than in men. The presumption is that women have relatively less stable or more responsive peripheral vascular systems than men.

Since many of the older patients in the group tested did not show any change, persons over 40 can probably smoke without evident immediate alterative effects on peripheral circulation.

Effect of cigarette smoke on the peripheral vascular system. J.A.M.A. 152:897-900, 1953.

¶ DIAGNOSIS OF PERNICIOUS ANEMIA may be facilitated by measurement of the excretion of urorennin. Of 50 patients with the disorder, Edwin G. Olmstead, M.D., and John S. Hirschboeck, M.D., of Marquette University, Milwaukee, find that 46, or 92%, excreted less than 0.3 rennin unit per 10 cc. of fasting morning urine and that none lost more than 0.5 rennin unit. The amount was less than 0.5 rennin unit in only 25% of 50 normal persons. Therefore, if a patient excretes more than 0.5 rennin unit per 10 cc. of fasting morning urine, pernicious anemia is most unlikely. If less than 0.5 rennin unit is excreted, pernicious anemia may or may not be present and further study is indicated. The diminished concentration of the enzyme is associated with atrophy of the gastric mucosa and is not pathognomonic of the disease.

Am. J. M. Sc. 226:84-87, 1953.

¶ THROMBOSIS AND EMBOLISM may be more easily and safely combated with warfarin sodium derivative (Coumadin Sodium) than with other anticoagulants now in use. With intravenous doses of 1 mg. per kilogram of body weight, therapeutic hypoprothrombinemia appears within eighteen hours and lasts from five to eight days, reports Shepard Shapiro, M.D., of New York University, New York City. Subsequent dosage is two-thirds the first amount. The action of this sodium derivative is predictable, the absorption constant, and the toxicity low. Excessive hypocoagulability seldom develops but is promptly counteracted by vitamin K. In 100 cases of acute myocardial infarction, pulmonary embolism, peripheral venous thrombosis, and migratory thrombophlebitis, no failure occurred. Warfarin is a 4-hydroxycoumarin compound used for rodent control.

Angiology 4:380-390, 1953.

¶ SCARLET FEVER TOXIN included in multiple antigen preparations induces a Dick-negative status in a large number of subjects; reversion to Dick-positive reactivity is not evident after three years. Among 418 children and adults given 2 or 3 injections, V. K. Volk, M.D., of Saginaw, Mich., Franklin H. Top, M.D., of the University of Iowa, Iowa City, and William E. Bunney, Ph.D., of New York City find that addition of scarlet fever antigens to mixtures of pertussis and typhoid vaccines and diphtheria and tetanus toxoids does not increase materially the severity of reactions. Tannic acid–precipitated antigen is apparently less effective. Although not generally indicated in the United States, inoculation against scarlet fever may be justifiable in institutions and in some parts of the world.

Am. J. Pub. Health 43:833-839, 1953.

When adequate trial of medical management fails to heal a gastric ulcer, surgery should be done.

Gastric Ulcer and Carcinoma

SAMUEL F. MARSHALL, M.D.
Lahey Clinic, Boston

TO temporize with a nonhealing, ulcerating lesion of the stomach involves serious risk to the patient.

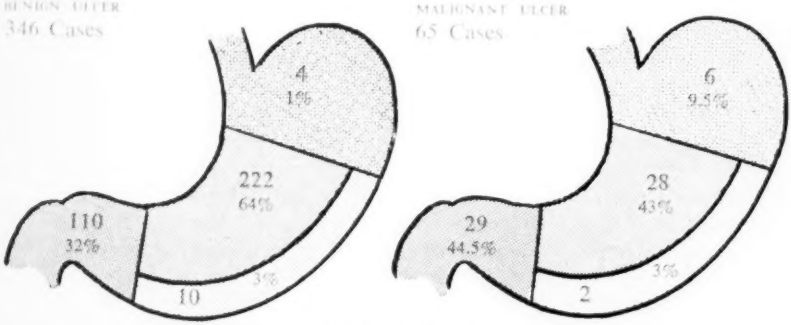
Malignant deterioration of gastric ulcer sometimes will occur, but the greater danger lies in treating an unrecognized cancer medically, since ulcerating carcinomas may cause symptoms indistinguishable from those of benign ulcer. This is the practical aspect of the situation as far as treatment is concerned, states Samuel F. Marshall, M.D., not whether a benign ulcer becomes cancerous or not. In many cases, differentiation must be made by pathologic examination after removal of tissue.

The only safe course is insistence upon surgical excision if healing is not complete at the end of an adequate period of controlled therapy. The physician must be aware that cancerous ulcers may improve with medical management and even appear to heal, but will never completely disappear. Gastric ulcer visible on the roentgenogram and characteristic in every way of benign ulcer proves to be cancer in at least 10% of cases.

When a diagnosis of gastric ulcer is made roentgenographically, the clinical and radiographic information should be evaluated and therapy planned as soon as possible.

If medical management is advised, the gastric ulcer must be watched by repeated roentgenologic and gastroscopic examinations. The only reliable evidence of a healing benign ulcer is disappearance of oc-

The relation of gastric ulcer to carcinoma of the stomach. Ann. Surg. 137:891-903, 1953.



Locations of benign and malignant ulcers

cult blood from the stools and of the ulcer crater as shown by films and gastroscopic examinations. If the ulcer recurs, surgical resection is mandatory.

The location of the ulcer is of some importance in distinguishing between benign and malignant ulcers of the stomach, but either type may occur in any part of the stomach. The location of gastric ulcers in 411 cases, both benign and malignant, is shown in the diagrams. Among the 346 cases of benign ulcers, one-third were within the prepyloric area and one-tenth on the greater curvature despite the fact that these are the areas usually occupied by malignant growths.

About one-half of all patients with gastric ulcers require operations for the lesions. A therapeutic test of medical treatment in the hospital is of considerable value and helps immeasurably in determination for or against surgery. The decision should preferably be made while the patient is in the hospital.

Vagotomy should not be used in the treatment of gastric ulcer. Even in a poor-risk patient the ulcer should be excised locally to obtain histologic evidence if doubt exists as to the benignancy of the lesion.

Arterenol for Shock Therapy

A. J. MILLER, M.D., AND ASSOCIATES

THE primary aim of therapy in shock is to increase the effective circulating blood volume. Therefore, vasopressor drugs should, theoretically, have a desirable effect.

Arterenol, a pressor amine, has been used in the treatment of 40 episodes of shock in 32 patients by A. J. Miller, M.D., A. Shifrin, M.D., B. M. Kaplan, M.D., H. Gold, M.D., A. Billings, M.D., and L. N. Katz, M.D., of Michael Reese Hospital, Chicago. Excellent to moderate pressor responses were observed in most cases, including shock associated with myocardial infarction, barbiturate intoxication, bulbar poliomyelitis, virus pleuropericarditis, ruptured ectopic pregnancy, and anaphylaxis.

The solution for infusion is generally prepared by adding 4 cc. of a 1:1,000 solution of arterenol to 1,000 cc. of 5% glucose in water or 0.9% sodium chloride in water. Infusion is usually started at a rate of 10 to 15 drops per minute and increased by about 5 drops every three minutes until the desired blood pressure is obtained. The rate of flow is then adjusted to hold the blood pressure at the desired level using the minimum rate of administration.

Arterenol may be given as interim therapy of oligemic shock until whole blood can be obtained.

Arterenol in treatment of shock. J.A.M.A. 152:1198-1201, 1953.

Cancer of the gastrointestinal tract should be diligently sought when digestive symptoms are equivocal.

Diagnosis of Gastrointestinal Cancer

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BECAUSE of the relative rarity of cancer of the gastrointestinal tract, most general practitioners have occasion to diagnose the disease probably no more than once every year and a half. The consequent lack of familiarity with the symptoms of the disease, particularly in early phases, is one reason that recognition is too often delayed until the condition is inoperable, believes John R. Paine, M.D.

Physicians must be constantly alert for the possibility of cancer; the worst should be suspected until proved otherwise.

ESOPHAGEAL CANCER

Carcinoma of the esophagus has no known precursors. The lesion occurs 5 times as frequently in men as in women. The incidence is unusually high among the southern Negroes.

Theoretically, about one-third of all patients can be cured. The tumors usually have a long asymptomatic interval of twelve to twenty-four months. In 10% of cases the primary lesion remains asymptomatic until the patient becomes moribund.

Intermittent dysphagia is common in the early stages; substernal pain and regurgitation indicate more advanced growth of the tumor. Swallowing becomes difficult only when the lumen is encroached upon sufficiently to interfere with food passage. Dilatation of the uninvolved portion may postpone or improve the dysphagia.

The key to earlier recognition is suspicion whenever a patient over 40 years of age has even slight dysphagia. Three factors are important for diagnosis: [1] a careful history, [2] fluoroscopic examination of the esophagus with barium by a competent roentgenologist, and [3] esophagoscopic examination.

A tentative diagnosis may be possible in 85% of cases from the history alone. Roentgen examination gives an unequivocal tentative diagnosis in 3 out of 4 cases and is suggestive in the fourth case. From 10 to 20% of the initial biopsy specimens do not show the presence of tumor tissue.

GASTRIC CANCER

Carcinoma of the stomach is much more common than esophageal growths. Only 5 to 10% of patients are now cured, but earlier therapy would increase this figure. Recognition and treatment of pre-

Early diagnosis of carcinoma of the gastro-intestinal tract. J. Indiana M. A. 46:737-744, 1953.

disposing conditions and precancerous lesions are important for prophylaxis.

Diagnosis may be ascertained before metastases by screening technics and greater attention to slight but suggestive symptoms. A silent interval is estimated to last from eighteen to thirty-six months.

The fluoroscopic screenings of asymptomatic subjects are not very fruitful. However, the results are more rewarding if selected groups of patients are screened, such as those without free hydrochloric acid in gastric secretions or with pernicious anemia. The finding of free hydrochloric acid does not prove that the patient does not have cancer nor does the lack of free acid make the diagnosis.

Many gastric polyps and peptic ulcers will, in time, undergo malignant degeneration. The incidence of cancer in the benign-appearing gastric ulcer is 15 to 20%. Medical treatment of such ulcers should not be prolonged beyond three weeks unless the patient becomes symptom free, occult blood disappears from the gastric contents and feces, and the ulcer size diminishes rapidly.

The most common indications of gastric carcinoma are pain, vomiting, and bleeding; but these are not the early symptoms. A lack of desire for previously acceptable kinds of food, discomfort after meals, a sense of undue fatigue at the end of the day, a trifling weight loss, or slight anemia must arouse suspicion. Tests for occult blood in the stools are not reliable.

Fluoroscopic examination of the stomach with ingested barium is the most valuable and reliable procedure. Gastroscopic study has limited usefulness.

COLONIC CANCER

With carcinoma of the colon, the silent interval is about the same as with gastric cancer. Approximately two-thirds of cases are incurable when the patient is hospitalized. Better results may be achieved by: [1] excision of known precancerous lesions, [2] more frequent use of the sigmoidoscope, and [3] routine rectal examination.

All polyps should be removed unless the procedure is impossible because of other disease. In the colon, 3 out of 4 polyps can be felt by the finger or seen through a sigmoidoscope. The lesions may cause slight bowel habit disturbances or intermittent bleeding.

If familial polyposis is found, total colectomy should be done. The procedure is also advisable for patients with ulcerative colitis who have pseudopolyposis and irreversible fibrotic changes in the wall of the colon.

One-half of malignant lesions of the rectum and colon can be reached by the finger and two-thirds can be seen through the proctoscope or sigmoidoscope. A single roentgen examination of the colon with barium may be misleading. Suggestive, persistent, or recurrent symptoms warrant repeated examinations.

Hyperchromic anemia is sometimes the first and only sign of a carcinoma of the cecum and ascending colon.

Safe removal of carotid body tumors may be accomplished in the plane of the arterial adventitia.

Tumors of the Carotid Body

H. MASON MORFIT, M.D., HENRY SWAN, M.D., AND ELLIS R. TAYLOR, M.D.
University of Colorado, Denver

LESIONS of the carotid body are not always benign and may cause serious difficulty by local invasion or distant dissemination. The tumor should be removed without disrupting arterial continuity.

The carotid body tumor is slow growing. A neck mass is usually the patient's chief complaint. Most patients are about 50 years old when medical aid is sought. As the lesion grows, slight pain is noted. Later, homolateral laryngeal and tongue paralysis and Horner's syndrome may appear as the result of nerve invasion, according to H. Mason Morfit, M.D., Henry Swan, M.D., and Ellis R. Taylor, M.D.

Differential diagnosis must include any entity capable of producing a mass in the neck, such as metastatic nodes from primary oral or thyroid tumors, bronchogenic cysts, aneurysms, salivary gland tumors, or primary tumors of soft tissue origin. The mouth and pharyngeal cavities must be thoroughly examined, usually as the first step in diagnosis.

The kind of fixation of the tumor, induration, discreteness, and other physical characteristics may be misleading in arriving at a diagnosis. Needle biopsy is often of value. When other diagnostic measures are fruitless, surgical exploration should be done.

The carotid body originates in the adventitial layers of the artery and maintains this relationship in the mature state. Even after the tumor has achieved enormous size, the media may not have been invaded. The media of the artery contributes most of the tensile strength, and the adventitia can therefore be dissected off and sacrificed in removal of a carotid body tumor.

Evaluation of the benign or malignant nature of carotid body tumors based on histologic grounds alone is extremely difficult to achieve. A long-term observation, however, indicates that a significant percentage of tumors recur in the local site, causing death or serious disability. Other patients die from general carcinomatosis as a result of distant dissemination of the tumor, apparently by the hematogenous route. The tumor cannot, therefore, be regarded lightly and should be excised unless removal is more hazardous than the existence of the tumor.

The carotid artery should not be ligated if inadvertently entered during dissection, since the mortality rate may run as high as 58%.

Carotid body tumors. Arch. Surg. 67:194-214, 1953.

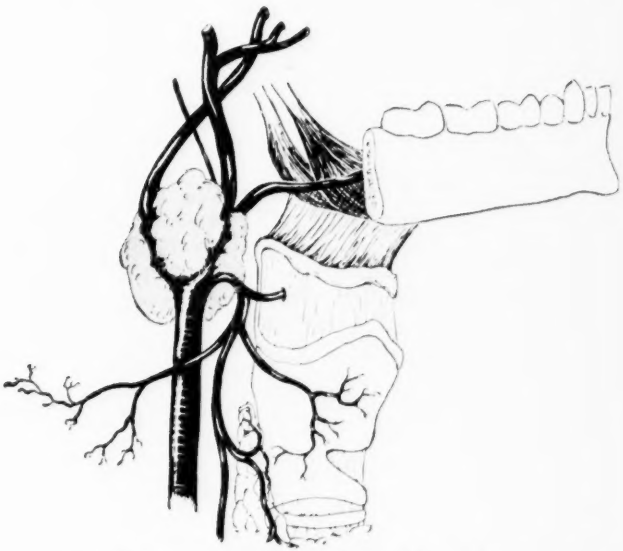
No pre- or postoperative adjunctive measure is yet available to make carotid ligation safe. Because of the location in the notch of the vessel, such ligation almost always means triple ligation, and great risk must be assumed. With reduced blood flow, cerebral anoxia occurs, with resultant cellular damage.

To remove a carotid body tumor, the main arterial channels are exposed and safety tapes are applied to the common, external, and internal carotid arteries. Dissection begins at some point away from the main body of the tumor in a plane calculated to be between the adventitia and the media of the artery. The media should be left on the artery and all overlying adventitia stripped away.

The plane can be well defined if procaine is injected into the adventitia. Moreover, the injection will counteract any stimulus to the carotid sinus, with attendant bradycardia.

If the main arterial trunk is entered, the hole should be sutured. When this is impossible, a primary anastomosis between the internal and common carotid arteries should be considered. If this is not feasible, a stored arterial homograft or freshly obtained venous autograft should be inserted.

Although peeling off the tumor with such a narrow margin seems to leave the way open to future local recurrence, the lesion apparently has a well-defined capsule in most cases. If dissection is done between the media and the adventitia of the artery, the capsule is not perforated and the tumor will be removed in toto.



Tumor at branching of carotid arteries

Retention of pedicle in total mammectomy assures permanence of breast contour.

Pedicle Dermo-Fat Flap in Mammaplasty

JACQUES W. MALINIAC, M.D.
New York City

A PLASTIC procedure that will prevent objectionable flatness in repair of nonmalignant breast enlargements is described by Jacques W. Maliniac, M.D. Total mammectomy with reconstruction utilizing a dermo-fat pedicle flap for filling material and free grafting of the nipples provides good cosmetic results.

In diffuse cystic disease with epithelial proliferation or in other widespread tissue dysplasias, total mammectomy should be done. Partial resection, leaving a segment of the gland without secretory outlet, is physiologically unsound and potentially dangerous. Retention of secretions, as a result of interrupted and obstructed ducts, constitutes a precancerous condition, especially during pregnancy.

A full thickness areolar graft is first taken, the dissection being continued over the nipple to a depth of about 0.5 cm. The graft is made simultaneously on both sides. The excess areolar tissue is refrigerated for use in case of loss of the partial primary transplant. To prevent cyst formation and to prepare a posterior dermo-fat flap as filling material, the epithelium on the posterior breast surface is removed with a Brown electric dermatome.

The anterior and posterior flaps are prepared by concave incisions. The anterior flap incision extends toward the upper margin of the areola, and the posterior extends from just above the submammary fold to the lower areolar margin. The incision above the fold is made only through the derma, thus providing for a dermo-fat pedicle flap.

With the central zone of the breast held by a clamp, the anterior and posterior flaps are separated from the gland with all the subcutaneous tissue available. All the glandular tissue is removed (Fig. 1a).

The posterior flap is partly disconnected along the submammary fold, and the pedicle is detached along the lateral insertion and folded in several layers before being tacked down to the pectoral fascia with slight tension (Fig. 1b). Thus, the normal contour of the breast is reproduced. The anterior flap is superimposed over the posterior, and final shaping is done with the patient half sitting (Fig. 1c).

If a one-stage procedure is used, a triangle of skin extending from the center of the future nipple level to the submammary fold is excised. The lateral edges are su-

Use of pedicle dermo-fat flap in mammaplasty. Plast. & Reconstruct. Surg. 12:110-115, 1953.

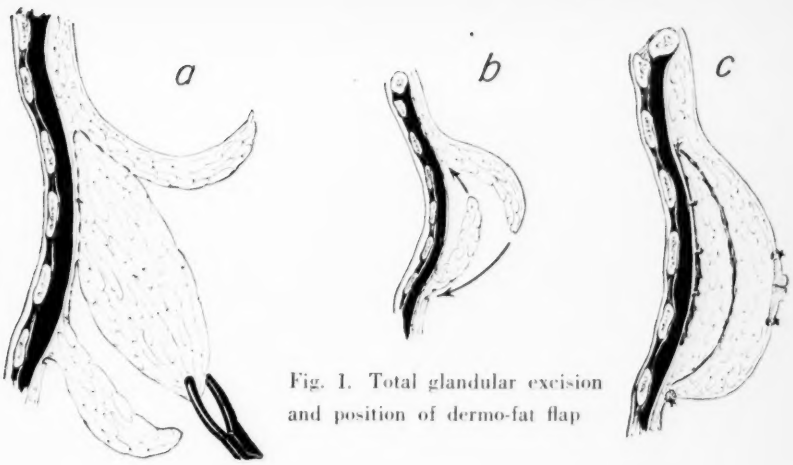


Fig. 1. Total glandular excision and position of dermo-fat flap

tured along the midline and submammary fold.

When the shape of the breast is reconstructed, the nipple site is prepared by dissecting the skin of the recipient zone down to the basal layer of the derma. The areolar graft is tacked on with interrupted nylon sutures cut long enough to permit the free ends to be tied over the pressure dressing (Fig. 2). The dressings over breast and graft are separate to allow early removal of the submammary sutures.

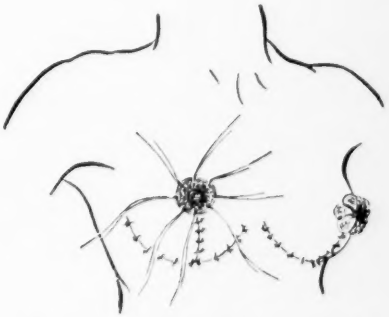


Fig. 2. Suturing and dressing of nipple-areola graft in new site

¶ GASTROINTESTINAL HEMORRHAGE and hepatosplenomegaly may occur concomitantly in patients with hereditary hemorrhagic telangiectasia. But G. P. Baker of St. George's Hospital, London, attributes the visceral enlargement to cirrhosis of the liver, whereas the bleeding results from intestinal telangiectases and not from ruptured esophageal varices. In a family of 32 persons the disease appeared in 12 members representing four generations; 2 of 5 of these individuals known to have had hematemesis or melena were found also to have splenic and hepatic abnormalities. In a third case hepatosplenomegaly may have been present.

Guy's Hospital Reports 102:246-252, 1953.

Present methods of managing hepatolithiasis are unsatisfactory; biliary obstruction is a common result.

The Problem of Intrahepatic Calculi

N. FREDERICK HICKEN, M.D., A. JAMES MC ALLISTER, M.D., AND DEE W. CALL, M.D.

University of Utah and Latter-Day Saints Hospital, Salt Lake City

HEPATOLITHIASIS is not rare. Refinements in autopsy technic and contrast roentgenography have demonstrated that calculi are often concealed in liver radicles. Such stones are associated with approximately 7.4% of all cholelithiasis.

The same factors that produce gallstones elsewhere—stasis of bile, hyperbilirubinemia, metabolic dysfunctions, and infection—are responsible for the genesis of intrahepatic calculi, remark N. Frederick Hicken, M.D., A. James McAllister, M.D., and Dee W. Call, M.D. The calculi are almost always multiple.

Chief danger with intrahepatic stones is biliary obstruction, because the stones tend to migrate into the common bile duct. The removal of the choledochal obstruction at the primary operation apparently permits such a free flow of hepatic bile that the stones are flushed into the common bile duct.

Symptoms, when present, are those of obstructive biliary colic. Sharp, colicky pain, often radiating from the right upper shoulder, is most common. Chills and fever are frequent.

Occasionally stones cause localized irritation which may terminate in fulminating cholangitis or hepatic abscesses. However, such complications are not common.

Preoperative diagnosis is unusual. Approximately one-half of the diagnoses are made by operative cholangiography and half by postoperative cholangiograms. Hepatic calculi should be suspected if extrahepatic ducts contain small stones, biliary sand, or inspissated bile pigments; if one segment of the liver is enlarged, cirrhotic, or stained with bile; if localized liver abscesses appear; or if calcified shadows are seen on roentgenograms.

Large stones may be extracted by instrument, and biliary sand and debris may be flushed from hepatic radicles. The problem of removing multiple calculi seems insurmountable. Chemical dissolution or fragmentation of residual stones by irrigation of the bile ducts with chemical solvents is not satisfactory. Hepatic stones may descend into large bile ducts and produce either painful colic or jaundice requiring surgical intervention.

Cholangitis, hepatitis, and pancreatitis apparently add to the dangers of operative intervention.

The problem of hepatolithiasis. Am. Surgeon 19:695-707, 1953.

Elimination of all vascular blowouts is the most important step in treatment of varicose veins.

Complete Stripping of Varicose Veins

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ERADICATION of all incompetent perforator vessels and elimination of vascular blowouts, two requisites to successful therapy of varicose veins, may be accomplished in a hospital procedure employing local anesthesia. Patients may then be mobilized almost immediately and the possibility of thromboembolic phenomena is greatly decreased.

A procedure presented by Robert A. Nabatoff, M.D., is designed to control all perforating veins and subsequently strip off the remaining varices.

The saphenous vein must be ligated flush with the femoral, and all perforators flush with the deep venous system (see illustration). If blowout persists, regurgitation may cause dilatation of adjacent veins and re-formation of varices. Furthermore, the varicose vein segments between the ligation sites often will require repeated postoperative injections.

Ligation sites

If a high saphenous vein ligation is performed and the remaining saphenous segment is stripped out in one piece, several large communicating veins are invariably torn. Aberrant saphenous trunks and the stumps of incompetent perforator vessels may also persist and cause recurrent varicosities.

The night before operation the varices are completely delineated with a skin-marking ink after the patient has been standing for ten to fifteen minutes. The sites of all incompetent perforator vessels are accurately located by inspection, palpation, and tourniquet tests. The pattern formed by incompetent vessels is fairly constant. Blowouts usually occur along the course of the great saphenous vein in the midthigh, just above and below the knee, and in the midleg and supramalleolar regions. Small incisions are made over the marked areas at the

A complete stripping of varicose veins under local anesthesia. New York State J. Med. 53:1445-1448, 1953.

time of surgery. The marking also aids in guiding the injection of local anesthesia. The patient is premedicated one hour before the operation with ⅙ gr. of morphine and 1½ gr. of Nembutal.

The first operative procedure is high ligation of the great saphenous vein. The femoral vein should always be visualized and the ligature placed flush with the femoral. All adjacent branches are ligated and divided.

Novocain, 1%, is then injected via long spinal needles along the distal saphenous segment, and a Mayo extraluminal stripper is advanced until obstructed by the mid-Hunter canal perforator vein. Through a short transverse incision in the midthigh region, all communicating branches at this level are ligated. The saphenous vein segment between the fossa ovalis and the midthigh is then extirpated.

A short incision is next made just below the knee, and all branches of the saphenous vein at this site are ligated; 2 or 3 vessels are usually encountered. At this level, as elsewhere, each perforator vein, competent or incompetent, is ligated as close as possible to the deep veins.

Novocain is then injected via the midthigh incision, downward along the course of the saphenous vein, as indicated by the skin marking. A similar injection is made by way of the incision just below the knee in an upward direction along the saphenous vein.

An intraluminal stripper is passed upward from the upper incision and withdrawn through the midthigh incision. The segment of vein is then stripped.

A similar segment of vein is stripped from the leg between a short supramalleolar incision and the incision below the knee.

Usually at the completion of the procedure, all obvious bleeding has ceased. After operation, an elastic bandage is applied from the toes to the knee. For the majority of patients, 4 incisions suffice.

If diseased skin or extremely tortuous and friable veins make complete stripping inadvisable, as much as possible of the diseased vein is extirpated.

¶ METASTATIC MENINGEAL CARCINOMA may be associated with the occurrence of neoplastic cells and low sugar values in the spinal fluid. The diminished carbohydrate content found especially in conjunction with the leptomeningeal type of tumor is attributed by L. J. McCormack, M.D., and associates of the Cleveland Clinic, Cleveland, in part to mechanical blocking and accelerated metabolism. The cancerous elements are well demonstrated with a toluidine blue stain and wet drop preparation and correlate with involvement of the meninges. Positive cytologic findings in 12 of 40 patients examined were related to primary or presumptively primary neoplasms of the central nervous system in only 3 instances.

Am. J. Clin. Path. 23:470-478, 1953.

When epilepsy is followed by subarachnoid hemorrhage, cerebral angioma is often the cause.

Diagnosis of Cerebral Angioma

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National Hospital, London

THE use of arteriography, which facilitates recognition of angioma, has shown that this vascular malformation of congenital origin is not a rare lesion. Ian Mackenzie, M.D., reports 50 cases seen during 1946-51 at a London hospital, approximately 1% of all admissions for neurologic conditions.

Early recognition is important, since surgery may be employed when the size and location of the angioma are favorable.

The patients are usually between 12 and 59 years of age when the diagnosis is made; in most cases the first symptoms are experienced before the age of 30.

The most common symptom is epilepsy. The attacks nearly always have focal features at some time, but not invariably at the onset. Patients may have psychomotor seizures typical of temporal lobe involvement.

Hemorrhage, either intracerebral or subarachnoid, is frequently the presenting incident. In some cases the subarachnoid hemorrhage is misdiagnosed as meningitis. Convulsions followed by hemorrhage are strongly suggestive of angioma. The reverse sequence, hemorrhage followed by epilepsy, suggests either aneurysm or angioma.

Headache of a degree sufficient to cause disability is occasionally an early symptom and is usually periodic. The headache may be migrainous but nearly aways has atypical features. A high incidence of bruit is found in the patients with headache.

Hemiplegia may be the presenting sign in a few cases.

Most patients with angioma have some physical signs of the condition, and these are of value in localizing the site of the lesion. The commonest are a spastic mono- or hemiparesis with appropriate reflex changes, with or without sensory loss. Sensory impairment is usually of the cortical type. The signs may be confined to visual field defects.

A bruit, which is an important diagnostic sign, can be heard in nearly all the patients who do not have hemorrhage. Papilledema and proptosis are less frequent.

Cerebral angiomas are situated predominantly in the distribution of the middle cerebral artery, accounting for the high incidence of focal seizures. The angiomas of patients with hemorrhage and lack of a bruit are located deep in the hemispheres.

A definite diagnosis can be made from arteriograms.

The clinical presentation of the cerebral angioma. Brain 76:184-214, 1953.

Surgery must be done
before function is hopelessly compromised in
a child with cord tumor.

Spinal Cord Tumors in Children

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University of Southern California and Children's Hospital, Los Angeles

STIFFNESS of the spine and pain in the neck, back, or legs, particularly at night, should direct attention to the possibility of spinal cord tumor in a child. If bowel or bladder control is impaired or the extremities are weak and numb, tumor must be a first consideration, remark Frank M. Anderson, M.D., and Merl J. Carson, M.D., after a study of 21 children with intraspinal neoplasms.

Examination may reveal spinal cord dysfunction with numbness and weakness of parts below the tumor level, abnormal tendon reflexes, loss of abdominal reflexes, and Babinski signs. However, physical examination often shows little for many months except limited motion of the neck or back or loss or increase of normal lordosis.

If the history and examination are not diagnostic, roentgenograms should be made. The entire spine is surveyed unless localization is definite. Common findings are erosion of rib ends, vertebral bodies, laminae, or pedicles and widening of the spinal canal.

Lumbar puncture and spinal fluid analysis are extremely important. The great majority of patients have increased total proteins or even xanthochromic fluid. Results of Queckenstedt's test may or may not be abnormal.

Study and consideration of the patient at this point will reasonably exclude poliomyelitis, amyotonia congenita, transverse myelitis, chronic meningeal infection, and epidural spinal abscess. Electromyograms may be useful in distinguishing tumor from spinal muscular atrophy, infectious neuronitis, and multiple sclerosis. In the latter conditions, motor dysfunction is usually widely scattered. Myelographic study with Pantopaque or Lipiodol is necessary if simpler procedures do not help diagnosis. Space-taking lesions will be disclosed in a large number of cases.

When primary intraspinal neoplasm has been recognized with reasonable certainty, an exploratory laminectomy is advisable. If sensory and motor abilities are deteriorating rapidly, operation should be done as an emergency measure to decompress the spinal cord and blood supply and thereby restrain the otherwise progressive cord destruction.

Fulminating progression of symptoms by no means signifies that the growth is invasive or inoperable; a

Spinal cord tumors in children. J. Pediat. 43:190-207, 1953.

benign space-taking lesion often causes such a course.

A circumscribed extramedullary neoplasm can ordinarily be removed entirely, further injury to the cord and spinal arteries being meticulously avoided. If function has not been too severely reduced, the result is gratifying and prognosis for life and recovery is excellent. Tumor within or densely adherent to the cord or cauda equina presents a much more complex problem, requiring critical appraisal of the technical situation and decision as to whether the possibility of additional damage by radical removal justifies such an undertaking.

Histologic examination of tumor tissue should be done while surgery is in progress and will often dictate how conservative or radical the operation should be. In dealing with an intramedullary tumor which does not appear externally, the surgeon may cautiously incise the spinal cord longitudinally at or near the dorsal midline along the presumed extent of tumor, thus providing a way for the mass to extrude spontaneously. Another operation is then done in about seven days when delineation has improved between tumor and cord.

If the tumor cannot be entirely removed without sacrifice of spinal cord function, radiation therapy is generally recommended.

Postoperative Infection of Lumbar Disks

FRANK TURNBULL, M.D.

SEVERE and chronic inflammatory disease may occur in a lumbar disk after an operation. Onset is indicated by development of meningeal irritation that resembles tuberculous meningitis. Expectant conservative management is advisable.

Frank Turnbull, M.D., of Vancouver describes 3 recent cases of infection after removal of the protruding portion of a lumbar disk for sciatica. In none was culture of the causative organism obtained, but a psoas abscess was drained in one and purulent fluid from the disk in another. All patients recovered after severe toxemia.

Probably infection is introduced at operation and becomes localized in the extradural space. The vertebral bodies may be invaded when the cartilage plates are scraped by the curet.

When rupture occurs through the posterior margin of a disk, healing involves an intrusion of blood vessels into the disk, together with invading fibrous tissue. If rupture is gross, the protruding lump of fibrocartilage may have to be pulled out at operation. Greater vascularization of the interior of the disk results. In either case conditions favor development of blood-borne infection.

Postoperative inflammatory disease of lumbar discs. J. Neurosurg. 10:469-473, 1953.

A change from the classical procedure in breech presentations deserves further study.

Bracht's Maneuver in Breech Delivery

ALBERT A. PLENTL, M.D., AND RAYMOND E. STONE, M.D.
Columbia University, New York City

PRESENT data on the use of the Bracht maneuver do not allow adequate evaluation of the measure, but evidence available from abroad indicates that rigorous investigation of the technic is warranted in the United States.

This is the conclusion reached by Albert A. Plentl, M.D., and Raymond E. Stone, M.D., who have surveyed the German, French, Dutch, and Spanish literature concerned with this method since Bracht's introduction in 1936.

The procedure aims to simulate the natural mechanism of unassisted breech delivery. After spontaneous delivery up to the umbilicus without push or pull, the baby's body and extended legs are held together with both the physician's hands to maintain upward and anterior rotation of the body. When anterior rotation is almost complete, the baby's body is held, not pressed, against the mother's symphysis with a force equivalent to that of gravity —that is, equivalent to the weight of the portion of the baby that has already been born. This produces a lordotic curvature of the baby's back. The maintenance of this position added to the action of uterine contractions and to the effect of moderate suprapubic pressure by an assistant are sufficient to complete the delivery by spontaneous mechanisms.

This description implies that the procedure can be used for frank breech presentations only, but most authors agree that after a reasonable amount of experience all forms of breech presentations can be delivered in this way, including double footling and complete breech presentations.

The maneuver may fail when deep surgical anesthesia is used, since the baby then lacks sufficient tone to play the passive role described. Short intermittent anesthesia alone or superimposed upon local or pudendal block would seem to be satisfactory. The procedure cannot be used to deliver a dead or macerated fetus.

Various oxytocics have been suggested to insure spontaneity of the delivery. In theory, intravenous administration of oxytocics, at a specific moment during the execution of the maneuver, would facilitate the delivery of the head and placenta. However, this practice would not be without occasional serious hazards.

Statistics for comparing the Bracht maneuver with the classical procedure are not yet available.

The Bracht maneuver. Obst. & Gynec. Surv. 8:313-325, 1953.

The infant mortality rate for all breech deliveries in the United States is 4.4%; a combination of the few adequate reports in the literature gives a figure of 1.39% for 1,719 deliveries in which the Bracht maneuver was attempted; but to base any conclusions on figures so diversely derived would be fallacious. At least 600 to 1,000 breech deliveries should be reviewed for purposes of comparison before improvements that have statistical significance can be demonstrated.

Causes of Secondary Amenorrhea

SAMUEL M. MARTINS, M.D.

PSYCHIC and emotional disturbances or nutritional deficiency associated with excessive weight gain may be etiologic factors in amenorrhea not resulting from pregnancy, lactation, or the climacteric. Abnormal variations of the physiology of the pituitary-ovarian relationship responsible for menstruation are the underlying causes of such amenorrhea, according to Samuel M. Martins, M.D., of Los Angeles. Disturbances of the thyroid and adrenal metabolism have secondary influence.

Women with secondary amenorrhea constitute about 5% of patients seen in large maternity clinics and about two-thirds have had no previous alterations in the menstrual cycle. The women are generally more overweight than other maternity patients and usually have had sudden weight gain preceding or concomitant with the cessation of menses. All eat a high-carbohydrate, low-protein diet which may affect body metabolism and alter the ovarian-pituitary relationship. The weight gain may result from overeating induced by a nervous state of instability.

Approximately two-thirds of the women report symptoms of pregnancy, especially nausea, vomiting, breast changes, breast secretion, and even fetal movements. Some have an intense desire for, or dread of pregnancy. Symptoms and history are sufficient in a few cases to justify classifying the condition as pseudocyesis. Such emotional disturbances may have a hypothalamic influence on the anterior pituitary.

No definite endocrine types are noted. Slight anemia is occasionally found. The incidence of syphilis is high. Over a third of the endometrial biopsies show secretory endometrium.

Treatment consists of reassurance, dietary regulation, and observation. Menses are reestablished spontaneously within three months of the original examination in about half of cases.

Secondary amenorrhea. West. J. Surg. 61:332-341, 1953.

A case of lumbar lordosis is described in which special positioning permitted delivery to progress.

Pelvic Inclination During Delivery

FINNUR ERLENDSSON, M.D.
University Hospital, Copenhagen

WITH pronounced lumbar lordosis the fetal head may slide past the pubis. A maneuver based upon hyperflexion at the hip joints permits normal delivery.

Application of the technic is described by Finnur Erlendsson, M.D., for a para II, 25-year-old patient, in whose first delivery, six years before, perforation was used.

According to the record of the earlier delivery, the patient was admitted in poor condition to the hospital thirty-one hours after the amniotic fluid was lost and after failure of forceps delivery at home. The fetus was in face presentation with chin pointing backward.

After an attempt to rotate and deliver the infant by forceps proved unsuccessful, delivery was accomplished by perforation of the head and traction. The baby measured 54 cm. and weighed 4,400 gm. The patient had an abortion five years later.

At full term in the third pregnancy, labor was not progressing after ten and one-half hours because the head of the fetus, in longitudinal presentation, back anterior, was firmly pressed against the superior border of the pubis, preventing delivery.

The external os was 8 cm. in diameter, the head high, anterior fontanelle in the middle of the pelvic inlet, the sagittal suture in the true conjugate diameter, and the posterior fontanelle not palpable. The membranes were ruptured, but only a small amount of fluid escaped. Repeated attempts at forcing the head down into the pelvic inlet by external pressure during contraction and intervals failed.

The patient's extreme lumbar lordosis (Fig. 1), accentuated each time the pains came on, suggested that, in this position, the plane of the pelvic inlet was nearly parallel with the lumbar column and that the fetal head was thus being forced onto the pubis by the contractions and was stuck there. Since the head could not descend into the pelvic inlet, the pelvic inlet might possibly be pulled over the head by marked hyperflexion at the hip joints.

Attempts caused pain and resistance by the patient, so chloroform anesthesia was instituted. With the patient's trunk slightly elevated and the legs held by an assistant and extended and slightly parted in maximum flexion at the hip joints (Fig. 2), the lumbar lordosis was

The significance of pelvic inclination during delivery. Acta obst. et gynec. Scandinav. 32:243-249, 1953.

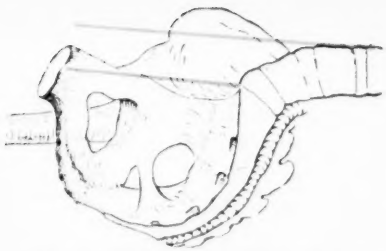

Fig. 1. With patient supine, plane of pelvic inlet parallels lumbar column.

Fig. 2. With hips hyperflexed, inlet forms wide angle with lumbar column.

straightened and the buttocks raised from the bed. With one hand, the physician exerted backward pressure over the pubis and, with the other hand, downward pressure on the uterine fundus in the longitudinal direction.

This maneuver easily and quickly caused the head to slide down behind the pubis, and delivery progressed normally. Approximately one hour after the chloroform was given, the patient was delivered of a living, 4,500-gm. male infant in the first vertex presentation.

The placenta was delivered fifteen minutes later. The puerperium was normal.

Spinal Anesthesia for Cesarean Section

BENSON C. SCHWARTZ, M.D., AND LOUIS H. DOUGLASS, M.D.

THE large amounts of spinal anesthetic often used for cesarean section at term are dangerous and should be reduced. Benson C. Schwartz, M.D., and Louis H. Douglass, M.D., of the University of Maryland, Baltimore, believe that not more than 1 to 2 mg. of Pontocaine should be given initially. Half of the initial dose may be repeated every twenty to thirty minutes.

After spinal tap is made, a ureteral catheter is threaded into the spinal canal, the needle is removed over the catheter, and the catheter is taped in place. While the mother lies flat on the back, head flexed on chest, 1.5 to 2 mg. of Pontocaine in 0.5 to 1 cc. of 10% glucose is injected. If the skin level of anesthesia has not risen to the umbilicus in ten minutes, the table is tilted head down for about thirty seconds. Although nitrous oxide or Pentothal may be required during closure, a supplement is seldom necessary before delivery.

Spinal anesthesia for cesarean section. Obst. & Gynec. 2:308-311, 1953.

Conservative treatment is usually possible for women of childbearing age with endometriosis.

Age and Parity with Endometriosis

JOE VINCENT MEIGS, M.D.
Massachusetts General Hospital, Boston

PROPHYLAXIS by early marriage and frequent childbearing is an important consideration in endometriosis. Studies of private and ward patients show that the lesion is 6 to 7 times more common among the former. These women are more likely to have married late and postponed or avoided pregnancy and usually have fewer children than the ward patients, points out Joe Vincent Meigs, M.D.

Endometriosis denotes endometrial tissue outside the normal situation; an individual lesion is an endometrioma. Endometriomas are usually confined to the pelvis but are not uncommon in the intestines, appendix, umbilicus, and laparotomy scars and have been reported in the pleura, forearm, and thigh. Adenomyosis—internal endometriosis—is more frequent among women who have had many children than among those who have had 2 or fewer.

Endometriosis usually does not appear until a woman is at least 26 years of age.

Etiology of the condition is unknown. Reflux of endometrium through the tube during menstruation has been mentioned as a possible factor. Another theory is that leftover cells of the celomic, pre-müllerian or müllerian epithelium are stimulated to grow by irritation from uninterrupted menstrual cycles. In either case long periods of uninterrupted menstrual cycles could be contributory and may explain the frequency of endometriosis among women who have few children or postpone childbearing until late years.

In most early cases treatment is not required. The lesions are easily felt as small nodules in the uterosacral ligaments or as small ovarian thickenings adhering to the broad ligaments. If the patient has no important symptoms and has borne children or is unmarried, observation every six months is sufficient.

Endometriosis is recognized during operation by the appearance of blue or white puckered areas in or on the pelvic organs, especially along the uterosacral ligaments. The area should be excised and fixed or marked with a suture to help the pathologist identify the lesion.

Although surgical therapy is more satisfactory, medical treatment can be used. Stilbestrol suppresses the disease but recurrence is common when the medication is stopped. Serious complications of stilbestrol therapy such as uterine hemorrhage have been reported.

Endometriosis. Obst. & Gynec. 2:46-53, 1953.

The best, but not always feasible, treatment is pregnancy. Growth of the lesion ceases during pregnancy and, occasionally, during lactation.

Castration is not the proper treatment unless the patient is near the menopause or has extremely extensive lesions. Castration may also be used for older women who have lesions in the bowel or bladder or who have children.

Involved bowel, bladder, or rectovaginal septum may be excised. Surgery is necessary for ureteral involvement. The tubes, ovaries, uterus, and cervix may need to be removed in advanced cases, but in many instances the endometrioma can be shelled out leaving a satisfactory ovary.

Roentgen-ray treatment may be used when conservative therapy has failed and pain or recurrence of bowel or bladder symptoms indicates further involvement. Presacral neurectomy is performed for midline pain.

Periodic vaginal bleeding may occur after total hysterectomy, a possible cause being recurrence of the disease in the vaginal apex. The recurrence rate after conservative surgery—with preservation of the ovaries—is about 7%.

About 30% of patients with endometriosis are infertile. Nearly one-third of these may be expected to conceive after conservative surgery.

Some patients with endometriosis are sterile because of adherent ovaries. Other adhesions or an adherent posterior uterus may interfere with conception.

¶ PINWORM INFESTATION may be eradicated in as many as 90% of patients by simultaneous administration of bacitracin and sulfasuxidine. For adults, K. F. Chan, M.D., and H. W. Brown, M.D., of Columbia University, New York City, prescribe 120,000 units of bacitracin and 3 gm. of sulfasuxidine in 4 doses daily for seven days. For children, the dosage per 10 lb. of body weight is 10,000 units of the antibiotic and 250 mg. of the sulfonamide given in 3 or 4 equal portions daily for seven days.

J. Pediat. 43:290-293, 1953.

¶ INFANTILE DIARRHEA accompanied by severe dehydration and electrolytic imbalance causes electrocardiographic abnormalities correlated with the degree of hypokalemia. Of these changes, Reagan H. Gibbs, M.D., Milton R. Hejtmancik, M.D., and Hilda Wiese, Ph.D., of the University of Texas, Galveston, find that alteration of the T wave is the most reliable index of the existence and extent of serum potassium depletion. Prolongation of the Q-T interval may also occur with normal concentrations. The S-T segment depression is more frequent with low levels and acidosis.

Texas State J. Med. 49:630-636, 1953.

Diphtheria and tetanus toxoids and pertussis vaccine in 1 injection will prolong previous protection.

Triple Antigens as Booster Doses

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University of Iowa, Iowa City

WILLIAM E. BUNNEY, PH.D.
New York City

A SINGLE booster dose of 0.2 cc. of a multiple antigen preparation can be safely given to previously inoculated children to renew protection.

In a reinoculation study of 251 children, V. K. Volk, M.D., Franklin H. Top, M.D., and William E. Bunney, Ph.D., determined the number and type of reactions and the rapidity of response to a booster dose of multiple antigen preparation. Observations were also made to find the smallest effective dosage. The immunity status of the children, who had received injections of a similar multiple antigen preparation three years before, was determined before reinoculation.

The antigen used contains diphtheria and tetanus toxoids and pertussis vaccine.

Observation of 235 children for eleven days revealed that a dose of 0.2 cc. causes fewer reactions than one of 0.5 cc. The reactions lasted only a few days and cysts did not develop at the site of inoculation.

Reactions after a booster dose are greater than after the first and second injections of the primary inoculation but not greater than those encountered after the third.

Blood drawn at the time of the booster injection indicated high diphtheria and tetanus antitoxin levels among the children who had received 3 primary injections but less for those who received 2.

The booster injections increased antitoxin titer against diphtheria and tetanus in two weeks. The 0.2-cc. dose was as effective as the 0.5-cc. in raising the diphtheria antitoxin level to 0.1 unit or higher and the tetanus antitoxin level to 0.05 unit or more. A multiple antigen preparation injection is therefore recommended as a booster dose at about three-year intervals, or upon subsequent exposure to diphtheria, or in cases of injury, when tetanus is a possibility.

The pertussis response is less striking. Primary injections do not protect against pertussis nor does a booster maintain a high proportion of positive agglutination tests.

Reinoculation with multiple antigen preparations of free-living children previously inoculated with multiple antigen preparations. Am. J. Pub. Health 43:821-832, 1953.

The good results obtained with streptomycin in tuberculous meningitis may be improved by adjuvant agents.

Treatment of Tuberculous Meningitis

U. S. PUBLIC HEALTH SERVICE COOPERATIVE INVESTIGATION

THE combination of intramuscular and intrathecal streptomycin, oral para-aminosalicylic acid (PAS), and oral Promizole is recommended for treatment of tuberculous meningitis as a result of a cooperative study involving 7 pediatric centers made under the direction of the U. S. Public Health Service.

Of 93 infants and children treated, 26 are alive and well without significant sequelae from meningitis two to four years after initiation of treatment, 54 are dead, and 12 are living with gross residua. One patient has not been traced.

Streptomycin, PAS, and Promizole were given to 46 of the patients while the other 47 received only streptomycin and PAS. Promizole does not seem to affect the course of the disease, and the one-year survival rates in the two groups were practically identical.

However, PAS and Promizole appear to reinforce the streptomycin and to decrease the likelihood of relapse. PAS postpones the emergence of streptomycin resistance. Both PAS and Promizole are easily administered and are relatively nontoxic.

Streptomycin is administered in as many six-week courses as indicated by the patient's condition, with a ten-day period with no streptomycin between courses. The intramuscular dose is 50 mg. per kilogram of body weight every twelve hours, with a maximum of 1.5 gm. per dose. Intrathecal streptomycin in a dosage of 50 mg. per day regardless of body weight is given daily for four days and then every other day. No unusual difficulties involving intrathecal administration of streptomycin were noted.

Lower dosages of streptomycin used early in the study proved less effective.

The daily dose of PAS, 0.2 gm. per kilogram of body weight, is divided into 3 doses and administered at eight-hour intervals. Promizole is given with a beginning dose of 0.5 gm. daily and increased as tolerated to 1 gm. daily for children under 6 months and 2 gm. daily for children over 6 months. Promizole and PAS are given continuously without interruption until four and a half months have elapsed after completion of streptomycin therapy.

Toxic effects include vestibular dysfunction and hearing loss. The capacity of children to compensate for vestibular damage is great and the risk is relatively minor in the face of an otherwise hopeless outcome.

Chemotherapy of miliary tuberculosis and tuberculous meningitis. Pediatrics 12:38-55, 1953.

An operation is described that may be used to correct obstruction of the ureteropelvic junction.

Vertical Flap Ureteropelvioplasty

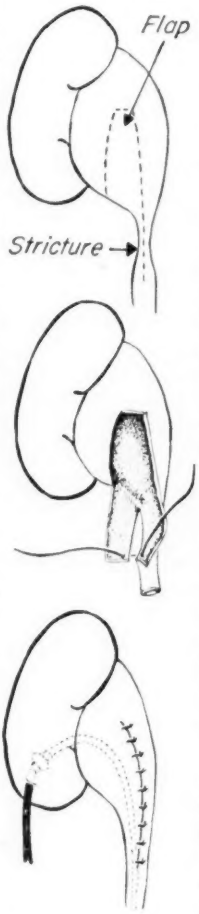
PETER L. SCARDINO, M.D., AND CHARLES L. PRINCE, M.D.
Savannah, Ga.

FOR the dependent type of ureteropelvic juncture obstruction, a vertical flap ureteropelvioplasty is particularly applicable.

Success with the procedure in all of 12 cases is reported by Peter L. Scardino, M.D., and Charles L. Prince, M.D. Since the operations are too recent to permit more than fourteen months' postoperative study, the encouraging results are not considered as long-range conclusions.

The required length of kidney pelvic tissue is determined by the extent of the ureteral obstruction. A longitudinal incision is begun in the ureter distal to the obstruction, extended proximally into the redundant pelvis, and then continued laterally for approximately 2 cm. and distally to the ventrum of the pelvis. This incision parallels the original pelvic incision.

The flap so produced is anastomosed to the incised strictured area with interrupted 0000 chromic catgut sutures. A McIver or Cummings' catheter is introduced into the ureter and pelvis by a lower pole nephrotomy.



The remaining pelvic and ureteral incisions are closed with interrupted 0000 catgut sutures. The approximation of the pelvic edges reduces the lumen of the redundant pelvis, but the pelvic size can be further reduced by excising additional tissue.

The pelvic flap preserves the blood supply and offers nearly unlimited width and length to reconstruct the narrowed ureter without disturbing the anatomic relations.

Ordinarily, the nephrostomy catheter is removed five weeks postoperatively. Before and after operation all patients should receive antibiotic therapy.

In some cases the operation has delayed, if not eliminated, the need for nephrectomy. The technic has been used to reduce the size of a hydronephrosis.

Vertical flap ureteropelvioplasty. South. M. J. 46:325-331, 1953.

Resection or fulguration is usually employed to relieve obstruction of the bladder neck.

Bladder Neck Obstruction

W. A. VAN NORTWICK, M.D., ROBERT B. MC IVER, M.D., AND ROBERT J. BROWN, M.D.
Jacksonville, Fla.

THE female vesical neck is often involved in most common urethral diseases, such as acute and chronic urethritis, caruncle, stricture, polyps, cysts, prolapse of the mucosa, and diverticulum. A baby girl may also have congenital narrowing of the bladder neck because of contraction, hypertrophy, or valve.

Infection of the posterior urethral and bladder neck mucosa and glands may lead to induration, thickening, hypertrophy, and, finally, obstruction. In many cases, resection or fulguration of the obstructing tissue is necessary, believe W. A. Van Nortwick, M.D., Robert B. McIver, M.D., and Robert J. Brown, M.D.

Diagnosis of obstruction is derived from an accurate history and complete study of the entire urinary tract by urethroscopic, cystoscopic, and pyelographic examination. Disturbance in voiding is the most common symptom. Pyuria, abdominal pain, and backache are also frequent.

General anesthesia is used for examination of infants and children, while a topical anesthetic is usually adequate for adults. The urethra should be dilated before instrumentation in all cases.

Necessary fulguration or resection for children is performed at the time of examination, if the parents consent. This is also true if general anesthesia is used for examination of an adult.

The mucosa may appear healthy or have reached a stage of extreme injection, granulation, trabeculation, and edema. The vesical neck is contracted and rises sharply from the level of the bladder wall. Polyps, papillomatous growths, and edema of the internal meatus may be associated. Thickened mucosa bulging into the bladder may resemble prolapse of the urethral mucosa or caruncle at the external meatus.

Removal of tissue by the resectoscope is limited to that seen while the scope rests without downward or other pressure, and with the long axis of the instrument in line with that of the urethra.

Release of a remaining, definite band or ridge is directed more in anterior and lateral directions than posteriorly because of the thinness of tissue between the bladder neck and the vagina. Removal of this band allows the bladder neck to assume a more normal position.

Adjacent inflammatory tissue is fulgurated. Caruncles or mucosal

Bladder neck obstruction in females. South. M. J. 46:691-694, 1953.

prolapse at the external meatus is treated by electrodissection and fulguration. An indwelling catheter is placed for continuous drainage for twelve to forty-eight hours. Infections are treated by the appropriate drug.

Since the procedure is not without danger, the surgeon will be well advised to do too little than too much. The process can be repeated later, if necessary.

Later care is directed toward controlling infection and preventing recurrence of stricture at the site of the operation. Secondary resection or fulguration should be considered a possibility until the patient is completely relieved of the disease.

Granulomatous Prostatitis

GERSHOM J. THOMPSON, M.D., AND DONALD D. ALBERS, M.D.

THE hard, firm, irregular prostate gland with granulomatous prostatitis may easily be confused during digital examination with carcinoma of the prostate. Only careful histologic study of biopsy tissue obtained by transurethral resection or perineal exploration can definitely establish the diagnosis.

Gershom J. Thompson, M.D., and Donald D. Albers, M.D., in studying 36 random cases of granulomatous prostatitis seen at the Mayo Clinic, Rochester, Minn., between 1943 and 1949, find that 20 of these were diagnosed preoperatively as carcinoma and 16 as benign hyperplasia.

Nothing specific in the history, course, or physical examination will distinguish the granulomatous disease. Knowledge of a fever or febrile episodes immediately before the onset of urinary symptoms might aid the physician in avoiding an erroneous diagnosis of cancer. However, infection can also appear in a gland already carcinomatous, especially after catheterization.

For patients with hard, firm prostate glands but repeated febrile episodes accompanied by urinary frequency, urgency, and tenesmus, definite diagnosis of cancer should be withheld until biopsy.

Great caution must be exercised in planning therapy for these patients. Hormonal therapy or, especially, surgical castration must not be considered without biopsy proof of cancer or roentgen evidence of bony metastasis.

The number of cases of granulomatous prostatitis is small compared to those of carcinoma of the prostate. However, in the individual case, the diagnosis is a most gratifying one to make. The response to transurethral resection is good in a majority of cases.

Granulomatous prostatitis: a condition which clinically may be confused with carcinoma of prostate. J. Urol. 69:530-538, 1953.

Operative blood pressure fall caused by celiac plexus reflex may be corrected by atropine injection.

Treatment of Celiac Plexus Reflex

BRIAN HALL SMITH, M.B.
Queen Elizabeth Hospital, Birmingham, England

SUDDEN fall in blood pressure during operation may be caused by the celiac plexus reflex which increases cardiac vagal tone. Atropine is a logical treatment, believes Brian Hall Smith, M.B.

The celiac plexus reflex is observed in patients whose upper abdominal viscera are being handled. The chief sign is sudden disappearance of auscultatory sounds or the localization of the pressure by a single beat at about the level of the previous diastolic pressure recording. Often the pulse remains palpable at the wrist, and the rate does not change greatly. When the surgeon stops handling the viscera, the pulsations are again heard.

Cardiac output depends on the venous return to the heart and on the force of contraction of the heart muscles. During the celiac plexus reflex, the force of contraction of the heart muscle is probably diminished and a fall in blood pressure occurs. Since the pulse rate remains relatively steady, the output per heart beat is decreased.

Use of the following measures is recommended as soon as the celiac plexus reflex is recognized:

1] The operation should be discontinued until the situation is under control.

2] The gallbladder rest, if raised, should be lowered.

3] Intravenous atropine in sufficient quantity to provide a fair degree of release from the cardiac vagal tone should be given immediately. Usually 1/100 gr. is adequate, the dose being increased or repeated if necessary.

4] Anesthesia is probably light, and should be deepened.

5] If necessary, the surgeon can block the celiac plexus intraabdominally.

When a slow preoperative pulse suggests a high degree of vagal tone, the following measures may be of prophylactic value:

1] Premedication with 1/75 gr. of atropine.

2] Use of Gallamine rather than *d*-tubocurarine.

3] Alternatively the celiac plexus can be blocked.

The nature and treatment of the coeliac-plexus reflex in man. Lancet 6779:223-227, 1953.

The patient agitated because he has or thinks he has heart disease presents a special problem.

Mentally Disturbed Cardiac Patients

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Harvard University, Boston

WHEN a patient with heart disease becomes confused or agitated, the cardiac status may be jeopardized and special factors must be considered.

Severe abnormalities are obvious, but Mandel E. Cohen, M.D., warns that slight or early agitated states should be suspected when a patient cannot sleep, cries easily, does not speak, becomes furious at a fancied slight, insists on discharge, refuses food, or manifests paranoid trends.

DELIRIUM

The disorder that seems to be secondary to heart disease and heart failure is delirium, a state of disturbed behavior. Sometimes the patient is apparently improving when the psychosis appears. Elderly people, children, and patients with damaged brains are probably more likely to become delirious than young or middle-aged adults.

The typical features include: disturbance and lability of mood, misinterpretations, disorientation, and hallucinations. The patient may manifest generally distorted feelings or ideas of fancied events.

The first step in treatment is the elimination of correctible abnormal factors. If the patient is febrile, a thorough reexamination should be done for complicating pneumonia, a new coronary occlusion, embolism, or unrelated new infection.

Heart failure may first be shown by onset of delirium in a patient believed to be compensated.

Almost all drugs are capable of causing or contributing to the delirious state. A lifesaving drug should not be discontinued because of delirium, but every attempt should be made to find a substitute.

Notable offenders are sedatives, such as barbiturates, opiates, and bromides. Others include diuretics, digitalis, atropine, cortisone, ACTH, large doses of salicylates, alcohol, and some chemotherapeutic agents. When a determination of the blood bromide reveals more than 150 mg. per 100 cc. of blood, bromidism is the likely cause of the delirium.

With heart damage, especially of the rheumatic variety, fever and delirium may indicate that bacterial endocarditis has developed.

In slight cases of Sydenham's chorea, the patient may be emotionally unstable, tearful, irritable, and listless. In the severe form, frank delirium is rare but possible.

Heart failure, fever, or some oth-

The management of disturbed cardiac patients. Mod. Concepts Cardiovas. Dis. 22:182-188, 1953.

er factor may precipitate so-called alcoholic psychoses in chronic alcoholics.

Various medical disorders such as hepatitis, severe anemia, pernicious anemia, gross electrolyte imbalance, injudicious use of cation exchange resins, uremia, infarction, and hemorrhage of any part of the brain may contribute to delirious states in cardiac patients.

MANIC-DEPRESSIVE DISEASE

The manic-depressive individual may have primarily cardiovascular symptoms resembling those with neurocirculatory asthenia and other manifestations such as a feeling of hopelessness and unworthiness, insomnia which wakes the patient in the early hours, and a morning depression which improves as the day goes on.

A suicide may be prevented if the physician is alert to the possibility in a patient who is upset, paces the floor, is unreasonable about future prospects, or seems to have developed neurocirculatory asthenia after 35 years of age which does not improve with reassurance.

Because of the grave danger of suicide, psychiatric assistance is advisable in the management. Shock therapy should be given with caution to the cardiac patient in view of the occasional fatality.

THYROTOXICOSIS

Although rare, thyrotoxicosis may be the cause of mental aberration, especially if tachycardia or auricular fibrillation occurs. A normal or low basal metabolic rate eliminates the diagnosis, while a protein-bound iodine above 8 gamma per cent, provided no iodides have been administered, or a radioactive iodine uptake of over 60% of the original dose in a forty-eight-hour test indicates hyperthyroidism.

Malingerers or persons with psychopathic personalities may ingest thyroid surreptitiously, provoking emotional overreaction, tachycardia, tremor, and other behavior abnormalities.

Besides cardiac involvement, myxedema may cause irritability, unreasonable behavior, and disturbed mood, especially depression.

EPILEPSY

Recurring seizures or convulsions may occur in cardiac patients and be followed by confusion with disturbed, combative, or sullen behavior lasting a few hours to days. Recurring convulsions may be the result of Adams-Stokes syndrome, embolism, or cortical infarcts.

BRAIN DISEASE

Disturbed behavior may appear after a stroke. Lesions producing such states may be located in the temporal lobe or midbrain. Multiple brain infarctions, arteriosclerotic in origin, may cause changes in thinking, mood, and behavior, accompanied by neurologic signs and strokes.

PARESIS

A delirious state is actually general paresis in patients with syphilitic aortic disease. The mental disease appears about twenty years after the initial syphilitic infection. The spinal fluid shows a positive

Wassermann reaction, high protein, lymphocytic pleocytosis, and sometimes a first-zone gold sol curve. The condition responds to appropriate treatment.

SENILE PSYCHOSIS

Patients with senile psychosis have retrograde amnesia and may lose the ability to make new memories. The general behavior may be uncontrolled. In contrast to delirium, in which the prognosis for recovery is excellent, this disorder becomes progressively worse. Senile psychotics usually live only about two years after admission to an institution.

TREATMENT

Disturbed patients sometimes refuse food and artificial feeding is necessary. A small nasal tube placed in the stomach will allow passage for fluids, medicines, and food. Oxygen should be omitted if the oxygen tent or nasal catheter provokes struggling. The patient must be protected from possible suicide or bodily harm.

Early Development of Preschizophrenic Children

HARRY BAKWIN, M.D.

THE early behavior of children who later have schizophrenia differs from that of normal children.

Harry Bakwin, M.D., of New York University–Bellevue Medical Center, New York City, contends that the unusual behavior, which may appear even at birth, supports the hypothesis that childhood schizophrenia is an encephalopathy.

At birth, the babies are thin, pale, and inactive. During early infancy, diarrhea, vomiting, colic, pylorospasm, excessive crying, and poor sleep are common. Irregularities in motor development are observed. At 6 months, the children appear unhappy. Sleep is restless. Frequent colds and gastrointestinal symptoms are noted. Emotional instability appears, evidenced by intense interest in an object, alternating with apathy, outbursts of rage, excessive shyness, and fright. At 12 months, the children are unusually shy and dependent. A lack of responsiveness and inability to vocalize is observed.

By 2 years, preschizophrenic children manifest many indications of the disease. Fears of high ceilings, strange places, rapid movements may be displayed. Ritualistic or compulsive behavior is prominent. The youngsters do not respond normally to affection. At 2½ years, behavior is regressive, particularly in speech. Play is compulsive and destructive. Violent temper tantrums appear.

The early development of children with schizophrenia. J. Pediat. 43:217-219, 1953.

Narcosis and delirium may help resistive mental patients not benefited by other psychiatric care.

Amytal-induced Delirium for Neurosis

EUGENE J. ALEXANDER, M.D.
Henry Ford Hospital, Detroit

MANY seriously disabled psychoneurotic patients are significantly improved by prolonged narcosis with Sodium Amytal followed by delirium when the drug is abruptly discontinued. The treatment is much less effective for conditions other than psychoneurosis and is recommended only when the illness has a significant psychoneurotic component.

Analyzing the results of Sodium Amytal narcosis therapy in a total of 324 cases during 1938-51, Eugene J. Alexander, M.D., explains that, although the theoretic explanation of the effectiveness of the method is not clear, patients not helped by psychotherapy or electroconvulsive therapy may derive lasting benefit from this approach.

The patients are kept in a state of deep narcosis by the oral administration of Sodium Amytal with about 60 gr. per twenty-four hours for seven to twelve days. The drug is then abruptly withdrawn; should the patient's condition subsequently deteriorate seriously, a barbiturate is given, but the Amytal is not repeated.

Usually, after withdrawal of the Amytal, the patient has physical and mental unrest and irritability manifested by insomnia, muscular tremors, hallucinations, and, in about 10% of cases, generalized convulsions.

The insomnia and tremor disappear in approximately three days; the hallucinations and delusions are usually dissipated at the same time but may persist for several more days or even weeks. In cases of undue persistence of mental symptoms, from 1 to 3 electroconvulsive treatments will interrupt the induced psychosis.

When all mental and physical symptoms have cleared, the patient usually feels much better than before therapy and, after five more days in the hospital and from two to six weeks of convalescence, may assume customary responsibilities.

Substantial, lasting improvement is obtained by 57% of psychoneurotics, and slight or temporary benefit is derived by enough additional patients to bring the total to 92%.

Fatal complications, 1.5%, include respiratory irregularity and blood pressure drop, aspiration of vomitus, pulmonary embolism, and post-Amytal toxicity. The latter complication could perhaps be controlled by barbiturates to reduce the severity of the reaction.

Sodium Amytal narcosis, with delirium, as a therapeutic method. Dis. Nerv. System 4:195-202, 1953.

Nonfatal complications severe enough to cause interruption of therapy, 3.8%, include drop in blood pressure, respiratory irregularities, and high fever from pulmonary congestion.

Moderately severe complications not serious enough to interrupt the treatment, 5.6%, are mainly lacerations and similar injuries incurred when the narcotized patient attempts to get out of bed and falls. These injuries can usually be prevented by a wide belt about the patient's torso, loose enough to permit the patient to turn but not to get out of bed.

The convulsions are considered largely innocuous and may even be therapeutic, although compression fractures of vertebrae have occurred.

Sodium Amytal in Diagnosis of Brain Disease

EDWIN A. WEINSTEIN, M.D., ROBERT L. KAHN, PH.D.,
LEROY A. SUGARMAN, M.D., AND LOUIS LINN, M.D.

INTRAVENOUS administration of amobarbital sodium (Sodium Amytal) can produce patterns of disorientation and denial of disease in patients with brain lesions who have not previously shown such behavior.

Edwin A. Weinstein, M.D., Robert L. Kahn, Ph.D., Leroy A. Sugarman, M.D., and Louis Linn, M.D., of Mount Sinai Hospital, New York City, obtained positive results in 57 of 88 such patients and negative results in all of 50 subjects without brain disease. A positive reaction is most likely when lesions are rapidly developing or deep seated. For instance, in 3 patients thought to have malignant tumors, the test results suggested intracranial metastases that were later verified. A negative test is not significant.

A set of 20 questions dealing with time, place, the examiner's identity, the patient's disease, and so on, is used before and during the test. Sodium Amytal, in a solution of 0.5 gm. in 10 cc. of distilled water, is given intravenously at a rate of 0.05 gm. per minute until effects are apparent. Quantity required varies from 0.1 to 0.8 gm.

During the Amytal test patients with brain disease whose answers are valid without the drug or after an injection of normal saline, may give incorrect reasons for being in the hospital or get the examiner's name and profession wrong. A year later, after improvement, results of an Amytal interview may still be positive, indicating that the disease persists. Behavior during the test is often a preview of symptoms that will develop later in the course of the illness.

The diagnostic use of amobarbital sodium ("Amytal sodium") in brain disease. Am. J. Psychiat. 109:889-894, 1953.

Instruction in self-care is of great importance for a patient with ulcer of the leg.

Treatment of the Indurated Leg

R. ROWDEN FOOTE, M.D.
Harrow Hospital, England

PHYSIOTHERAPY is important in restoring the postthrombotic leg to a near normal condition.

Childbirth, operations in the pelvis, and some acute specific fevers, such as typhoid, predispose to thrombosis of the deep veins of the lower extremity. Frequently the leg becomes the seat of brawny edema; ulceration, eczema, and chronic invalidism may result.

Prophylactically, sepsis and traumatic surgery should be avoided. Massage and active and passive motion of the limbs should be started soon after delivery or surgery. The early diagnosis of deep vein thrombosis and immediate instigation of anticoagulant therapy may avert invalidism.

Thrombosis occurs much more commonly in the fat person. Therefore, excess weight should be removed before an operation is attempted on legs with varicosities, states R. Rowden Foote, M.D.

Useless superficial varicosities with retrograde circulation can be stripped, but other conditions, including damage to the deep venous system, are involved in the etiology of leg ulcers.

Usually, edema can be controlled and ulcers healed by compression bandages. Elevation of the legs in bed and active movement will accomplish the same purpose but may be economically impractical. Good, dry elastic bandages not only support the leg but apply self-massage during exercise.

A two-way stretch bandage is invaluable for compression treatment since the double elasticity of the bandage allows stretching without losing width. Two-way stretch may be used in combination with one-way stretch bandages. Each patient should be instructed in the correct application.

After the ulcer has healed, physiotherapy is important to prevent recurrence of the ulcer and edema. Daily centripetal rubbing of the elevated leg or ambulant compression therapy is necessary until the limb is soft and slim. Active and passive exercises must be taught to the patient. Bicycle exercises in the supine position and Buerger's exercises are extremely helpful.

Painful chronic ulcers can produce limitation of motion in the foot and ankle and, occasionally, the knee. When severe, manipulation using general anesthesia is warranted, but other forms of mobilization are usually sufficient.

If the patient is unable to do active exercises, strong-surged fara-

Physiotherapy and the indurated leg. Brit. J. Phys. Med. 16:166-167, 1953.

dism can be given to the lateral and medial popliteal nerves while elastic bandages are in place on the leg. The use of ultraviolet light is seldom necessary but may give additional aid by sterilizing the floor of the ulcer bed.

Encouragement of the individual to help himself is essential. The patient must be made to realize that prolonged treatment will frequently result in cure but that neglect will cause failure. Weight reduction, care of anemia, cure of tineal infection, and production of general good health must be stressed.

Treatment of Plantar Warts

HENRI L. DU VRIES, M.D.

EXCISION of the plantar condyle of the metatarsal overlying a plantar wart gives complete relief in most cases without leaving a disabling scar or deformity.

The plantar surface of the head of each metatarsal has 2 condylar projections. Those of the middle 3 metatarsals end in sharp points extending proximally. During walking the condyles bear an added pivotal backward thrust and may gouge the soft tissue. A sharp and projective condylar point may cause fibrotic changes in the skin and subcutaneous tissue. The resultant warts and deep-seated calluses are often extremely painful and a major disabling problem.

Henri L. DuVries, M.D., of Columbus Hospital, Chicago, makes an incision immediately over the involved metatarsal phalangeal joint. The skin and extensor tendon are retracted, and the capsule is incised longitudinally. The capsule is retracted with the skin margins, and a vertical incision is made in each side of the joint capsule, freeing the metatarsal head to be delivered dorsally.

The involved toe is plantar-flexed by the thumb of the surgeon's left hand, while the left index finger presses the plantar surface of the metatarsal.

With the metatarsal head thus out of the wound, the plantar condyle is amputated by a cutting forceps (see illustration) and the surface is smoothed and rounded. The capsule is then closed by interrupted sutures and the skin margins are approximated.

New approach to the treatment of intractable verruca plantaris (plantar wart). J.A.M.A. 152:1202-1203, 1953.

Extensive electrical disturbances in the anterior temporal region appear with psychomotor epilepsy.

Psychomotor Epilepsy: A Syndrome

JOHN S. GARVIN, M.D.
University of Illinois, Chicago

MANY previously classified types of epilepsy may be brought into one syndrome called psychomotor epilepsy, with a locus of common pathologic physiology in one or both of the temporal lobes as shown by the electroencephalogram.

Approximately 30% of patients with psychomotor epilepsy are between 20 and 30 years of age and only a few are under 10. Neurologic examination usually reveals nothing abnormal. Electroencephalograms show a spike-focus in the anterior temporal regions with spread to the rest of the cortex. Some of the personality symptoms may be owing to involvement of the frontotemporal connections, believes John S. Garvin, M.D.

In about 25% of patients the aura is usually psychic and consists of a *déjà vu* phenomenon, a sense of unfamiliarity, or a feeling of being in a previous period of history. Some attacks are preceded by a bad taste or smell. A sensation of fear or insecurity may come with or before the aura.

After the aura the patient is usually amnesic and may make various movements with the hands, jaws, and lips. During the seizure the patient usually stares in a fixed vacant manner and may laugh or cry. Some patients perform coordinated complex acts such as driving a car; however, close observers are able to tell that the patient is having a spell.

Actions are not always the same during the attacks, which may last from a minute to several hours. Afterward the patient may continue the activities or fall and be limp for a few seconds. Urinary incontinence is frequent, but patients seldom bite the tongue or have definite clonic convulsions.

Other patients with the same electroencephalographic disorder do not have all the characteristics described. Some have symptoms almost entirely of the visceral type with psychic aura and with attacks of weakness, paleness, and palpitations. Some report a trance or dream-state sensation and associate the attacks with sleep.

Another group, approximately 63%, have predominantly generalized seizures frequently beginning with an epigastric or psychic aura. After attacks such patients frequently exhibit automatism or repetitive movements which do not appear as purposeless as the ordinary post-seizure actions.

Psychomotor epilepsy: a clinicoencephalographic syndrome. J. Nerv. & Ment. Dis. 117:1-8, 1953.

The intelligence of the majority of psychomotor epilepsy patients appears to be average. However, personality disturbances are frequent. Many have psychotic episodes and often attempt suicide. Thus, a diagnosis of psychosis without epilepsy is occasionally made. When attacks are controlled, the personalities frequently become worse.

Psychomotor epilepsy is most resistant to anticonvulsant medication. About 50% of patients become free of seizures or greatly improved when treated with a combination of Dilantin and Mesantoin or Dilantin and phenobarbital. About 45% are greatly improved with Phenurone. If the personality becomes worse with suppression of the attacks, partial control may be better.

Occasionally the syndrome may be produced by a space-occupying lesion in the temporal lobe. Neurologic disorders are usually noted and the electroencephalogram may show a slow-wave focus in addition to spikes in the anterior temporal region.

Serum Neuritis

ARTHUR L. WATKINS, M.D.

MONTHS of disability, even permanent weakness, occasionally result from therapeutic use of a serum, particularly horse serum. The condition is more common than realized, remarks Arthur L. Watkins, M.D., of Harvard University, Boston, who has examined 16 patients with serum neuritis in the past seven years.

Serum sickness appears first, usually three to ten days after the injection. Urticaria, lymphadenopathy, fever, and arthralgia usually occur spontaneously. Signs and symptoms of neuritis appear a few hours to a few days after the serum sickness. Pain develops in one or both shoulders. The neuritis has a predilection for the right upper extremity and the muscles supplied by the fifth and sixth cervical roots. The discomfort usually subsides gradually over several weeks.

Weakness appears in the affected muscles within a few hours or days. If degeneration of the peripheral nerve, as demonstrated by electrical excitability, occurs, atrophy will follow. Minor hypesthesia is demonstrable. Residual weakness persists in a substantial number of cases.

Because of the possibility of serum neuritis, especially after occupational injuries, the use of tetanus antitoxin should be avoided whenever possible by employing previous immunization with tetanus toxoid.

Serum neuritis. Arch. Phys. Med. & Rehabil. 34:231-234, 1953.

Complications and functional results of commissurotomy are quite similar whether patients are young or over 50.

Mitral Commissurotomy after Middle Age

O. HENRY JANTON, M.D., ROBERT P. GLOVER, M.D., AND THOMAS J. E. O'NEILL, M.D.
Hahnemann Medical College and Hospital, Philadelphia

ELDERLY people who are disabled by mitral stenosis should not be denied corrective surgery because of age.

For the greatest functional improvement, operation is done when the critical point of contractions of the valvular opening is reached, the time that progressive symptoms of stenosis first appear. Thereafter, change in orificial diameter is negligible.

The most decisive indicator of future surgical benefit is cardiac size. Little or no improvement can be expected if the right ventricle is greatly enlarged, especially when associated with enlargement of the left ventricle or massive dilatation of the left auricle, believe O. Henry Janton, M.D., Robert P. Glover, M.D., and Thomas J. E. O'Neill, M.D.

The aim of operation is threefold: to enlarge the constricted orifice, restore motion to valve leaflets, and prevent embolism by reducing stasis in the left auricle and eliminating a clot already formed.

The mitral valve is approached through the left auricular appendage. Coagulated blood is often confined to this region and can be removed by auricular appendectomy. Incision of mitral angles or commissures often restores function without serious insufficiency.

The valve opening is generally about as wide as a cigaret. Chordae tendineae are thick and matted, and occasionally the valve is rigidly calcified and fixed. However, leaflets may be separated 3 or 4 cm., and most apertures can be extended to 1 or 2 fingerbreadths, enough for satisfactory use.

In selection of cases for commissurotomy, typical mitral stenosis is usually quickly recognized, but associated insufficiency or aortic valvular disease may be confusing.

Roentgen and fluoroscopic measurement of heart chamber size is most helpful. The left ventricle may be evaluated by position of the cardiac apex in frontal projection. If this view is not clear, and if the posteroinferior cardiac recess is obliterated, the heart ought to be catheterized.

Valvotomy probably should not be done if electrocardiograms show abnormal left axis deviation or a combined strain pattern.

Though undertaken at ages of 50 to 61 years, commissurotomy was successful in 15 of 20 instances at the Hahnemann Hospital. Morbidity

Mitral commissurotomy in the older aged patient. Circulation 8:321-327, 1953.

and mortality were comparable to rates for younger groups. At last report, only 3 operative deaths had occurred in a total of 35 cases, an incidence of 8.5%.

The first elderly patients were 11 women and 9 men, all seriously incapacitated. Acute congestive failure had occurred at least once in most cases, slight activity caused severe dyspnea, and cardiorespiratory embarrassment was growing worse. Systemic embolism had developed in 5 instances, as long as seventeen years preoperatively, and repeated hemoptyses in 3.

The mitral valve was insufficient in 9 subjects, and 12 had permanent auricular fibrillation. The right ventricle and left auricle were enlarged in all cases, the left ventricle rarely.

Operation enabled 6 individuals to resume ordinary activities with maintenance doses of digitalis, and 9 were restored to an almost normal life, though a low-sodium diet and mercurial diuretics were necessary.

Among those failing to improve, 1 had a greatly enlarged right ventricle, 1 refused to follow medical instructions, and the valve of another was heavily calcified and impossible to repair. Of 4 persons with extreme cardiac size, 2 died with congestive failure a few months after operation.

Surgical complications included 2 cerebrovascular accidents, 1 causing hemiplegia followed by virtually complete recovery. Midthigh amputation was required by a woman with previous thromboangiitis obliterans and a postoperative vascular occlusion. All other patients were discharged ten to twenty-one days after surgery and have been observed six months to two years. None has had further rheumatic infection, hemoptysis, or embolic phenomena.

Elective Herniorraphy for the Elderly

MARTIN W. DEBENHAM, M.D., AND COOPER DAVIS, M.D.

UNLESS special considerations contraindicate surgery, hernias should be repaired whenever discovered, regardless of the patient's age. Morbidity appears to be no greater than for young adults and the rate of recurrence no higher, observe Martin W. Debenham, M.D., of University of California, Berkeley, and Cooper Davis, M.D., of the San Francisco Hospital from a study of 365 hernioplasties; 194 of the patients were men over 55 years of age.

Mortality in older patients with intestinal obstruction is high and strangulated hernia is a frequent cause of obstruction in such patients. Elective hernioplasty among the elderly entails a mortality rate of less than 0.5% compared to 10% for strangulated hernia.

Inguinal hernia in men over 55. Geriatrics 8:403-405, 1953.

Chronic low back pain usually is relieved by exercises to strengthen abdominal and gluteal muscles.

The Problem of Low Back Pain

W. A. L. THOMPSON, M.D.
New York University, New York City

COMMON backache causes much human discomfort and loss of industrial manpower which can be prevented by proper attention to diagnosis and treatment.

Low back pain as discussed by W. A. L. Thompson, M.D., does not mean backache from sudden muscle strains, tuberculosis, metastatic tumors, or rheumatoid arthritis, but the much more common condition that is too often dismissed as malingering or neurosis or treated to no purpose by diathermy. In addition to a complete history and physical examination, a thorough orthopedic study of the patient should be made, including roentgenograms of the lumbosacral area.

The sacroiliac joint is frequently blamed for low back pain, but the lumbosacral joint is more likely to cause trouble. The lumbosacral angle, which should be 14 to 40°, may attain 60 to 80° owing to man's erect stance. The ligaments are thereby greatly stretched. The angle is affected by the slant of the sacrum and by the ability of abdominal and gluteal muscles to protect the joint from sudden movement. Hard work, sedentary living, obesity with weak abdominal musculature, and anomalies causing unstable vertebrae can all lead to pain in this joint.

An unstable vertebra may cause added stress on the disk and produce degeneration of the disk material with subsequent herniation. If the degenerated disk is still encapsulated, bed rest or manipulation may relieve pain.

If the disk material has herniated through the capsule and a fragment is lying against a nerve root, disk removal is necessary. A stabilization procedure must follow disk removal if the patient has low back instability. A Hibbs type of operation is preferable and achieves successful fusion in 90% of cases. When the fusion is extended and the fourth lumbar vertebra is included, about 1 of 4 operations fails.

However, 80 to 90% of individuals with common backache do not need operations. Diathermy will not help. The trouble is postural and can be cured or vastly improved by exercises and good medical management. Reduction of excess weight may be required.

Most important is strengthening of abdominal and gluteal muscles. Exercises must be carefully instituted and supervised because too many patients are lazy, easily discouraged, or both.

Keeping the patient with low back pain employable. Indust. Med. & Surg. 22:318-321, 1953.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Sympathetic Surgery for Ménière's Disease*

QUESTION: Under what circumstances should stellectomy or sympathectomy be done in Ménière's disease?

Comment invited from

LEIGHTON F. JOHNSON, M.D.
JOHN R. LINDSAY, M.D.
FRANZ ALTMANN, M.D.

► TO THE EDITORS: There can be no doubt that the sympathetic nervous system exerts an influence on the neurovascular functions of the labyrinth. This is very evident from the clinical responses obtained by the late Dr. E. R. Garnett Passe and myself, although the laboratory demonstration of such influence has so far proved elusive.

Dorsal sympathectomy after the method of Smithwick, in which the first dorsal ganglion is not severed, would appear to be the method of choice at this time. The operation may be indicated for one or more of the classical symptoms of Ménière's disease.

Recurrent attacks of incapacitating vertigo which interfere with the patient's work or well-being are adequately controlled in 80% of cases by dorsal sympathectomy. Patients selected for operation are usually those in whom the usual medical regimes have been found wanting. Occasionally the patient may be seen during an attack of vertigo so that the effect of stellate block may be ascertained. Destructive labyrinthotomy can accomplish the same end but only at the price of destroying the remaining hearing. Dorsal sympathectomy, on the other hand, not only preserves the hearing but will often improve speech intelligibility very strikingly.

Tinnitus secondary to such end organ disease as Ménière's disease frequently responds favorably to stellate ganglion block; this being the case and if the symptom is unduly distressing, dorsal sympathectomy is indicated. Success will be achieved in about 65% of cases. It should be emphasized that cases of tinnitus which do not respond to stellate ganglion block—for example, cases secondary to otosclerosis or acoustic trauma—are not suitable for sympathectomy.

Nerve deafness of recent origin should be considered an acute surgical emergency. An acute fulminating type of Ménière's disease may damage the hearing with astonishing rapidity; if the deafness is allowed to persist the damage will become permanent. The exact time interval is not known but it is

*MODERN MEDICINE, July 15, 1953, p. 97.

probably not more than one or two days. If stellate ganglion block produces any significant improvement in the hearing, a dorsal sympathectomy is indicated in the next twenty-four hours. Should this opportunity be lost, the only chance of avoiding irreversible nerve damage is missed.

LEIGHTON F. JOHNSON, M.D.
Boston

► TO THE EDITORS: During a visit in London last year I canvassed a number of men whose opinions on sympathectomy for Ménière's disease should be of value. They had sent cases to Dr. Passe and had tried the operation themselves. Of 3 men with whom I discussed the treatment and who had firsthand opportunities to observe, none was convinced of its value.

This treatment is based upon the assumption that [1] hydrops of the labyrinth is the result of spasm of vessels in the stria vascularis or other intralabyrinthine vessels, [2] this spasm can be prevented by interruption of the sympathetic nerve supply on that side, and [3] stellectomy or sympathectomy accomplishes this and arrests or cures the condition.

Up to the present, experimental observation that would either confirm or deny the hypothesis of vascular spasm as a possible cause for Ménière's disease is lacking. Observations have shown, however, that prolonged stimulation of the sympathetics produces no change in function of the ear.

In the absence of an established indication for the treatment of Ménière's disease by stellectomy or sympathectomy, one can only compare results obtained by those who have tried the same method. Confirmation of the value of this treatment by colleagues has so far been unconvincing.

Procaine blockage has been supported by at least one favorable report. Rather limited observations in this clinic have not demonstrated any relief when the injection was made during acute attacks of vertigo. Our limited experience with procaine injection does not warrant any statement regarding the effect on the course of the disease.

Evaluation of any therapeutic measure for this disease demands extensive and critical observation, and the effects of stellectomy or sympathectomy for Ménière's disease must still be considered unconfirmed. In view of this fact, treatment with procaine block appears to be definitely preferable but must be viewed purely as a trial method.

JOHN R. LINDSAY, M.D.
Chicago

► TO THE EDITORS: When considering surgery on the sympathetic nervous system for the treatment of Ménière's disease and of certain forms of perceptive deafness, one must keep 2 facts in mind: [1] the limited degree of our knowledge of the finer vascular and sympathetic nervous supply of the inner ear and [2] the equally limited knowledge of the physiologic effect of sympathetic stimulation and inhibi-

tion on the inner ear. The claim, for instance, that procaine block of the stellate ganglion in man produces dilatation of the vessels of the membranous canal and of the supporting trabeculae, when viewed through a fenestra in the bony canal, has not been confirmed in experiments in young cats. In these animals, visualization of the cochlear vessels is possible through the transparent round window membrane without any surgical interference with the normal physiologic conditions of the inner ear.

The prevailing theories of the pathogenesis of Ménière's disease are not the result of experience gained from actual observation of facts but are based on logical deductions and conclusions *per analogiam*. Those theories are working hypotheses at best and should never be mistaken for more than that. Under these circumstances sympathetic surgery for Ménière's disease is still in the experimental stage.

My own experience with stellate ganglion block in Ménière's disease and in cases of perceptive deafness with tinnitus has been disappointing, and for that reason sympathetic surgery was performed in none of my cases. However, in my opinion, this type of surgery is not contraindicated in certain cases, provided one realizes the purely experimental nature of the planned intervention. The procedure could be tried for patients with disabling attacks of vertigo but relatively good hearing, when the medical treatment had been completely unsuccessful. A successful operation on the sympathetic system would obviate an intracranial section of the vestibular portion of the eighth nerve, a much more extensive and not always satisfactory procedure.

FRANZ ALTMANN, M.D.
New York City

Recurrent Hernias*

QUESTION: What is the usual cause for recurrence after repair of inguinal hernia?

Comment invited from

DONALD J. FERGUSON, M.D.
ROGER T. DOYLE, M.D.
J. MURRAY BEARDSLEY, M.D.
AMOS R. KOONTZ, M.D.
C. C. BURTON, M.D.
MANUEL E. LICHTENSTEIN, M.D.
D. P. HALL, M.D.
LEANDER W. RIBA, M.D.
JACKSON K. HOLLOWAY, M.D.
GEORGE V. ROSENBERG, M.D.
JOHN E. SUTTON, M.D.
LEIGH F. WATSON, M.D.

► TO THE EDITORS: The fact that recurrent hernias can usually be repaired successfully at a second operation suggests that such recurrences are caused by some fault of the surgeon. Dr. Ernest A. Ryan has pointed out a common error, that is, "missed hernias." This error in diagnosis can be avoided by taking one minute to explore the inguinal and femoral region digitally after opening the peritoneal sac.

Another common mistake is failure to trim the spermatic cord and close the internal ring snugly around it. As McVay has pointed out, the internal ring is an opening in the

(Continued on page 138)

*MODERN MEDICINE, July 1, 1953, p. 85.

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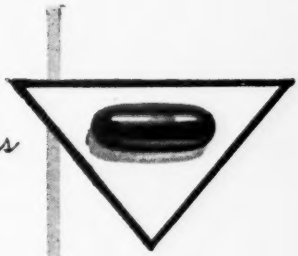

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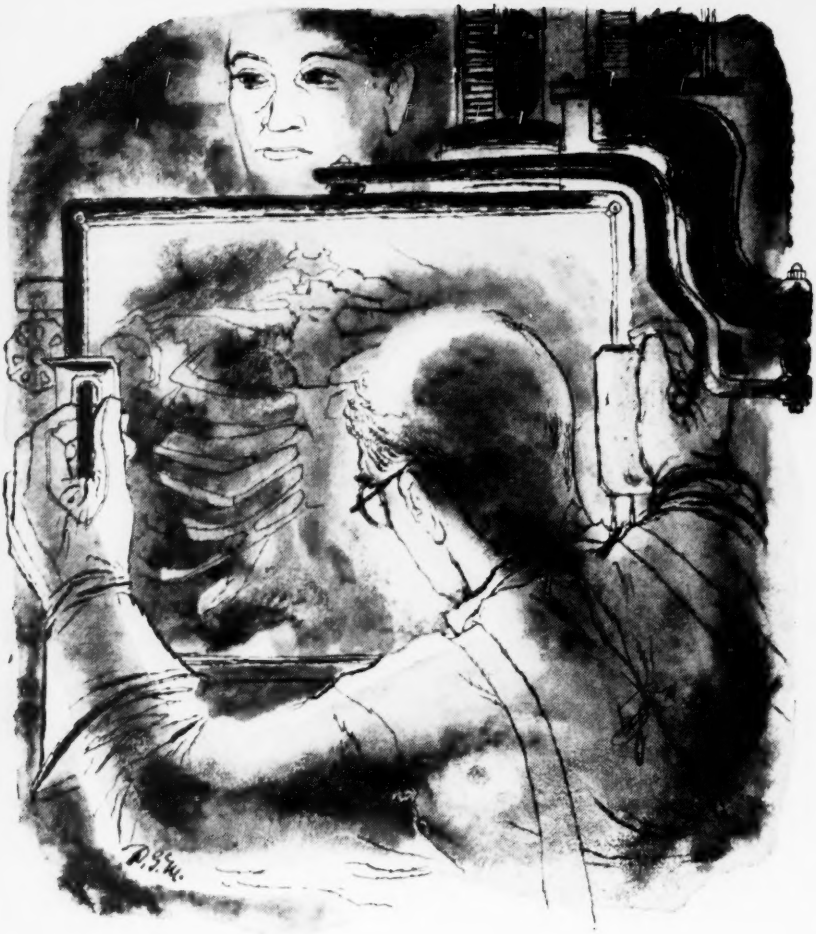

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*Hermann, I. F., and Smith, R. T.: JL.- Lancet 71:271 (July), 1951.

transversus layer of the abdomen and cannot be repaired by suturing the internal oblique muscle to the inguinal ligament. The internal ring should be closed around the cord by suturing the transversus aponeurosis and fasciae to the femoral sheath, and the cord should be sutured to the opening in 5 or 6 places to prevent fat protrusions.

When the McVay operation is used, accessory hernia locules can hardly be overlooked, and the suture line, which is begun medially between the transversus layer and Cooper's ligament, terminates naturally in the proper closure of the internal ring.

An error that has been made when Cooper's ligament is sutured is failure to close the femoral ring. The femoral vein must be accurately located, and the suture line should continue laterally along Cooper's ligament until the last suture is somewhat posterior to the vein. The ligated stumps of the epigastric vessels often provide a good lateral anchorage for the subsequent stitch between the transversus layer and the femoral sheath.

Good surgeons have had recurrence rates of only 1 to 3% since the time of Bassini and Halsted. Use of the McVay operation by experts apparently has reduced the recurrence rate virtually to zero.

DONALD J. FERGUSON, M.D.
Minneapolis

►TO THE EDITORS: The usual cause of recurrence after repair of inguinal hernia is inadequate repair of the primary existing hernia.

A brief review of recent literature indicates a small percentage of recurrence in a series of cases in which Cooper's ligament was utilized to repair inguinal hernias.

I have been interested in the technic of hernia repair to prevent recurrence. Our experience and review of cases show that complications which occur are not a cause for recurrence.

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Our rate of recurrence in the past several years employing these methods has been extremely low.

Our experience with industrial hernias over a period of twenty

(Continued on page 142)

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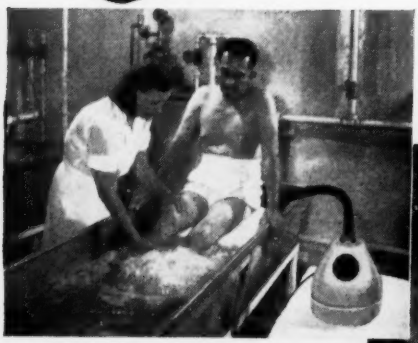

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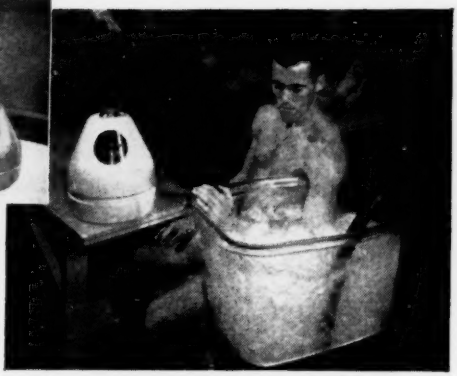

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years indicates that the chance of recurrence is no greater in patients who return to work early than in those who take extended periods of disability.

I wish to make a plea to have large series of patients reported in whom the McVay or superior pubic ligament type of operation is used. Especially, those patients who have been observed five years. Mayo and Keeley have proved that a five-year period is necessary in determining recurrence rates.

ROGER T. DOYLE, M.D.
Boston

►TO THE EDITORS: The most important causes for failure in the treatment of inguinal hernia are inadequate surgical experience and the tendency to use routine types of repair rather than giving proper attention to the presented weaknesses. In a small percentage of cases, poor tissues rather than technical errors can be blamed.

Tension is to be avoided in all circumstances and, if necessary, relaxing incisions are used to prevent it.

In *indirect hernia* many surgeons still do overlapping repairs in spite of the fact that there is no weakness of the floor. In every case of indirect hernia, the sac should be opened and the floor palpated for direct weakness or femoral hernia. If neither is found, all attention should be directed to high removal of the sac and proper closure of the internal ring. This should include suturing of the cremasteric fascia to the transversalis fascia. In the majority of cases, the aponeurosis does not need to be opened through the external ring.

In *direct hernia* the bladder must first be mobilized away from the peritoneal sac in every instance. This should be done very completely to eliminate pressure from a distended bladder in the lower part of the floor. All redundant peritoneum should be excised and closure made with a running suture. Simple plication of a direct sac is not to be recommended in this type of hernia.

The next step is snug closure of the transversalis fascia up to the internal ring, at which point the internal ring is obliterated by suture to the cremasteric fascia. The inguinal ligament rather than Cooper's is employed in rebuilding the floor. However, when for any reason this structure appears inadequate, such as in certain cases of recurrent hernia, Cooper's ligament should be utilized for the procedure.

The conjoined tendon alone cannot be depended upon as sufficient reinforcement of the floor. Therefore, the aponeurosis of the external oblique is always utilized along with it. As a rule, these structures are brought to the pubic spine and the shelving edge of Poupart's ligament with interrupted sutures of nonabsorbable material. Overlapping of the free edge is usually carried out, but it is more important to have a single strong layer than to splinter this structure in an attempt to overlap it.

J. MURRAY BEARDSLEY, M.D.
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†Fromer, J. L., and Cormia, F. E.: J. Invest. Dermat. 18: 1, 1952.

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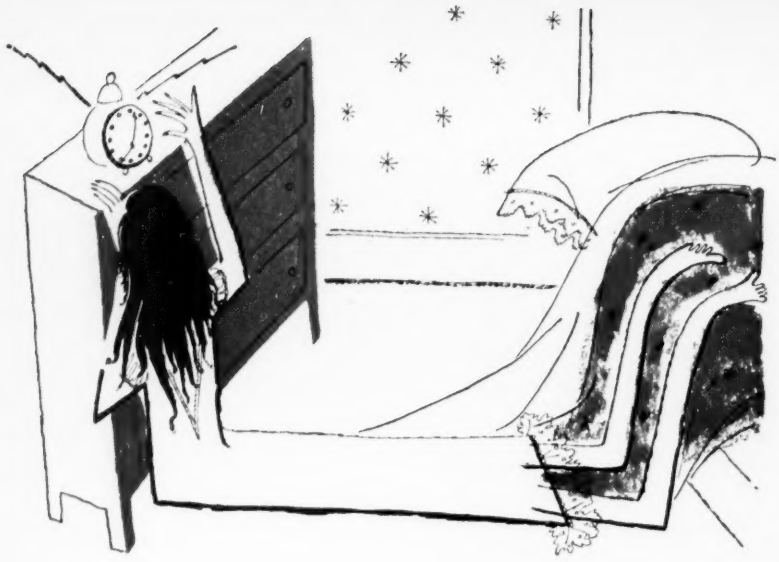

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►TO THE EDITORS: The surgeon must have the proper attitude toward hernia repair. No surgeon who feels that a hernia operation is easy and of little importance should ever operate on a hernia. Success depends upon the most meticulous pains with every detail of the operation as well as the postoperative care.

In indirect inguinal hernia especially, the sac must be carefully removed. In direct inguinal hernia, if the sac is simply a diffuse bulging through Hesselbach's triangle, it may be simply pushed back and the bulge converted into a flat surface by puckering sutures. Every experienced surgeon has operated upon cases of recurrent hernia in which it is obvious that the sac has not been properly dealt with at the previous operation. Often the sac has not been touched. One can be sure of this in congenital hernias in children, when at second operation the testicle is still in the bottom of the sac at the bottom of the scrotum.

In early indirect inguinal hernias, after the sac has been properly dealt with, a simple closure of the transversalis fascia around the cord is often all that is necessary. Lytle has pointed out that suturing the cord to the fascia prevents the tugging on the peritoneum that may start a new hernia sac.

A surgeon recently published a "reliable method" of hernia repair "applicable to all types of inguinal hernia" and "within the province of the ordinary operator." Such an oversimplification is bound to result in failures. The method must be made to fit the case, and the "ordinary operator" should be a well-trained surgeon.

After the sac has been properly dealt with and a method of repair suitable to the particular case has been selected, the method must be executed properly. The following factors contribute to failure:

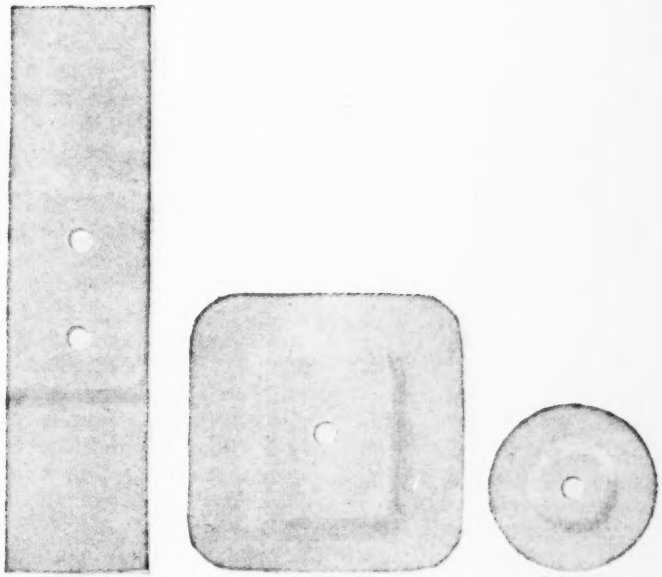
•*Areolar tissue left on important structures which are to be sutured together.* Such tissue leads to a filmy, flimsy type of union with no strength. If the areolar tissue is thoroughly removed before suture, the structures are brought into intimate contact, and a strong union results.

•*Tension.* Unquestionably, tension cannot always be completely eliminated in hernia repair. However, it can be largely obviated by a proper shifting of tissues. One of the most useful methods is the relaxation incision in the sheath of the rectus muscle, introduced by Halsted many years ago. Obviously, if structures are sutured together without tension, the union will be stronger and more lasting.

•*Absorbable sutures.* In hernia repair it is absolutely essential that important structures sutured together be held in apposition until firm healing takes place. That absorbable sutures do not do this in a significant proportion of cases has been demonstrated by series of cases in which the recurrence rate is several times as high with catgut as with silk.

•*Poor tissues.* Large defects with poor tissues are frequently encountered in large direct hernias, in

(Continued on page 148)



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large indirect hernias of long standing, and in recurrent hernias. Often the surgeon cannot depend on the tissues immediately at hand for a cure. Various methods have been used to supplement the tissue deficiency, such as flaps of fascia, free fascia grafts, osteogenic grafts, and so on. In recent years I have found tantalum gauze very effective in supplanting these tissue deficiencies.

AMOS R. KOONTZ, M.D.
Baltimore

►TO THE EDITORS: The causes for recurrent hernias in the inguinal region may be placed in the following categories:

Failure to remove completely all locules of the sac—In our experience, comprising some 6,000 hernia operations limited exclusively to adult males, a simple cylindric indirect sac without some variant is rarely encountered. The more thorough the anatomic exposure and dissection, the greater the incidence of variants of the sac.

In more than 50% of hernias operated on in our clinic, the indirect locule has had an associated direct component; in other words, concomitant mural weakness is associated with the sacculation and, consequently, measures must be taken to repair the wall in addition to complete excision of the sac.

To obviate possibility of overlooking a locule, we strongly advocate approaching the hernia at the abdominal ring. By following the peritoneum consistently from the internal ring, each locule of the sac is identified, mobilized, and reduced. For instance, a femoral saccule is inguinalized and then converted into its parent sac; similarly, a direct component is indirectalized.

Evaluation of structural weaknesses—While certain standardized operative procedures are used for the repair of various defects of the wall, the operation should be individualized and adapted to the existing anatomic weakness. The surgeon should have in mind the criteria for the repair selected. There are actually 3 basic reparative procedures: [1] inguinal ligament repair with or without funicular transposition, [2] Cooper's ligament repair, and [3] the combined inguinal ligament and Cooper's ligament repair. In our clinic, Cooper's ligament or the combined repair is used in about 10% of the hernia operations.

Suture material—The type of suture used in repair has been the source of much controversy and difference of opinion. Ordinarily, we prefer silk but appreciate the fact that silk granuloma obtains at times.

In Cooper's ligament procedures fewer recurrences result in our clinic when autofascial strips are used. The use of living sutures in inguinal ligament repair is indicated only for patients who have a narrow body of rectus muscle with rudimentary conjoined tendon associated with insertion of internal oblique and transversus abdominis muscles into the rectus sheath a variable distance from the pubic tubercle. A relaxing incision in the sheath rectus, as advocated by Fall-

(Continued on page 152)

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1. Beckman, H., and Tatum, A. L.: Wisconsin M. J. 51:185, 1952. 2. Carroll, G., and Allen, H. N.: J. Urology 55:674, 1946. 3. Kirsin, T. J., and Bridges, J. P.: Am. J. Surgery 52:477, 1941. 4. New and Nonofficial Remedies, A.M.A., 1954, p. 88. 5. Scudi, J. V., and Duca, C. J.: J. Urology 61:459, 1949. 6. Scudi, J. V., and Reinhard, J. F.: J. Lab. & Clin. Med. 12:1304, 1918. 7. Duca, C. J., and Scudi, J. V.: Proc. Soc. Exper. Biol. & Med. 66:123, 1947. 8. Schloss, W. A.: Connecticut M. J. 14:994, 1950. 9. Knight, V., and others: Antibiotics & Chemotherapy 2:615, 1952.

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**King, C.G.: Trends in the Science of Food and Its Relation to Life and Health, Nutrition Review, 10:4, (Jan.) 1953*

is, Reinhoff, and Tanner may be sufficient to relieve undue tension, but we would caution against reflecting the sheath.

C. C. BURTON, M.D.
Dayton, Ohio

► TO THE EDITORS: The article by Dr. Ryan on recurrent hernias was interesting and informative. I believe recurrences will be fewer when each patient with an inguinal hernia has a "custom tailored" repair done. The inguinal region requires a complete survey anatomically and the repair should fit the defect, deformity, or developmental anomaly.

The cause for recurrence after repair of an inguinal hernia varies with the type of hernia originally present.

• *Indirect*—Failure to remove the sac because of neglect in seeking it or inability to locate it or incomplete removal leads to recurrence.

Failure to [1] close the transversalis fascia snugly about the cord at the internal ring, [2] remove lipomas to make possible this snug closure, and [3] close defects in the fascia where vessels perforate also encourages recurrence.

An external ring opposite the internal ring helps recurrence. Dr. Ryan noted that the indirect recurrence was most frequent. This is contrary to our experience.

• *Direct*—Failure to repair the defect in the transversalis fascia and to reinforce the abdominal wall with fascia available in the field, or by rotated flaps, transplanted fascia, or nonirritating foreign material, and failure of healing predispose to recurrence. Suture material will not heal a wound. Wound healing is a vital phenomenon which can be prevented by loss of blood supply, delayed by infection or foreign body, prolonged by malnutrition, and frustrated by distracting forces from coughing, sneezing, straining at defecation or urination, or from obesity or ascites.

Dr. Ryan notes that in 317 of the 369 recurrences, evidence of suture material was not found. Previous repair with catgut was assumed in these cases. Catgut is notorious for losing its tensile strength sooner than the nonabsorbable suture and also acts as a foreign body. Thus tissues are not held in approximation long enough for the healing process to run its course. The repair becomes flimsy and predisposes to an early recurrence.

• *Pantaloon hernia*—Failure to remove the indirect sac when an obvious direct hernia is present or failure to repair a weak abdominal wall when an indirect sac is removed leads to recurrence.

• *Sliding hernia*—Failure to repair the large defect in the transversalis fascia in either the direct or indirect hernia also induces redevelopment.

• *Femoral hernia*—Many femoral hernias are called inguinal and operated on as inguinal and of course recur because they were femoral hernias all the time. There is need for complete examination and removal of the femoral hernial sac.

MANUEL E. LICHTENSTEIN, M.D.
Chicago

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►TO THE EDITORS: World War II statistics of the British Services placed the recurrence rate following inguinal hernia repair at 20% within the first six months and 30% in twelve months. This seems a little high when compared to the present average figures.

It is well to classify causes when considering recurrence.

Avoidable causes

- Failure to individualize each hernia repair
- Faulty surgical technic

Unavoidable causes

- Poorly developed musculature
- Old age
- Intercurrent infection
- Acute respiratory complications
- Accidental trauma

Conference with surgical colleagues at the University of Louisville reveals agreement that avoidable causes are most commonly responsible for recurrence. There is a tendency to do a standard named hernia operation on all patients; this reasoning is fallacious. The surgeon must be flexible in his approach and vary or modify his repair to meet any situation encountered on exploration of the inguinal canal. The main objectives, that of sac ligation in indirect hernia and repair of the musculofascial defect, must be accomplished; this may mean sacrificing a preconceived idea of repair and at times abandoning a favorite procedure. The ingenuity of the surgeon may be taxed in his deviation from beaten paths but it may lessen his recurrences.

Destructive dissection in the inguinal canal is practiced by a few surgeons. Both gauze and blunt instrumental dissection with tearing of tissues has been carried on very assiduously, destroying natural defenses. Stripping of fat from a broad area of the external oblique aponeurosis is harmful, when technically all that is necessary is the denudation of the portion to be imbricated in a repair.

Gentle dissection with the scalpel has become a lost art in some quarters. A great principle in surgery, that clean-cut wounds heal kindly, is disregarded. The surgical aphorism of coaptation of tissue without strangulation is being ignored by many in inguinal herniooplasty, perhaps with greater frequency than in any other operation.

The sewing of tough, white, fibrous tissue to tough, white, fibrous tissue is a sound surgical principle, regardless of where the tissue is found; its neglect may foster the recurrence of an inguinal hernia.

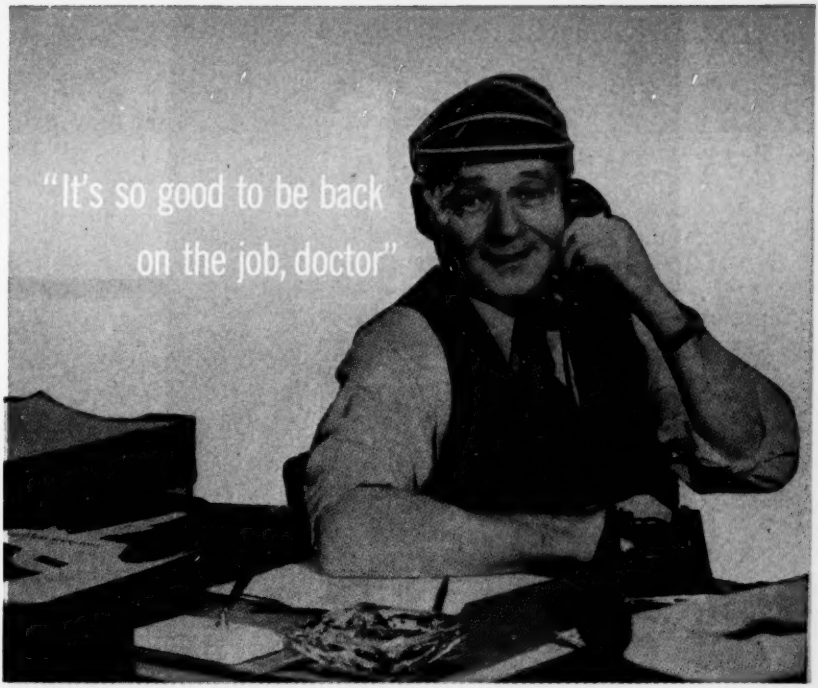
D. P. HALL, M.D.

Louisville

►TO THE EDITORS: There are many causes of recurrent hernias after surgical repair. Some, however, remain obscure.

- Inadequate surgical exposure or dissection of the hernial sac or sacs followed by inadequate repair of the abdominal defect heads the list. A recurrence after such an inadequate procedure can frequently be charged to the operator's mediocre training or limited experience.

(Continued on page 158)



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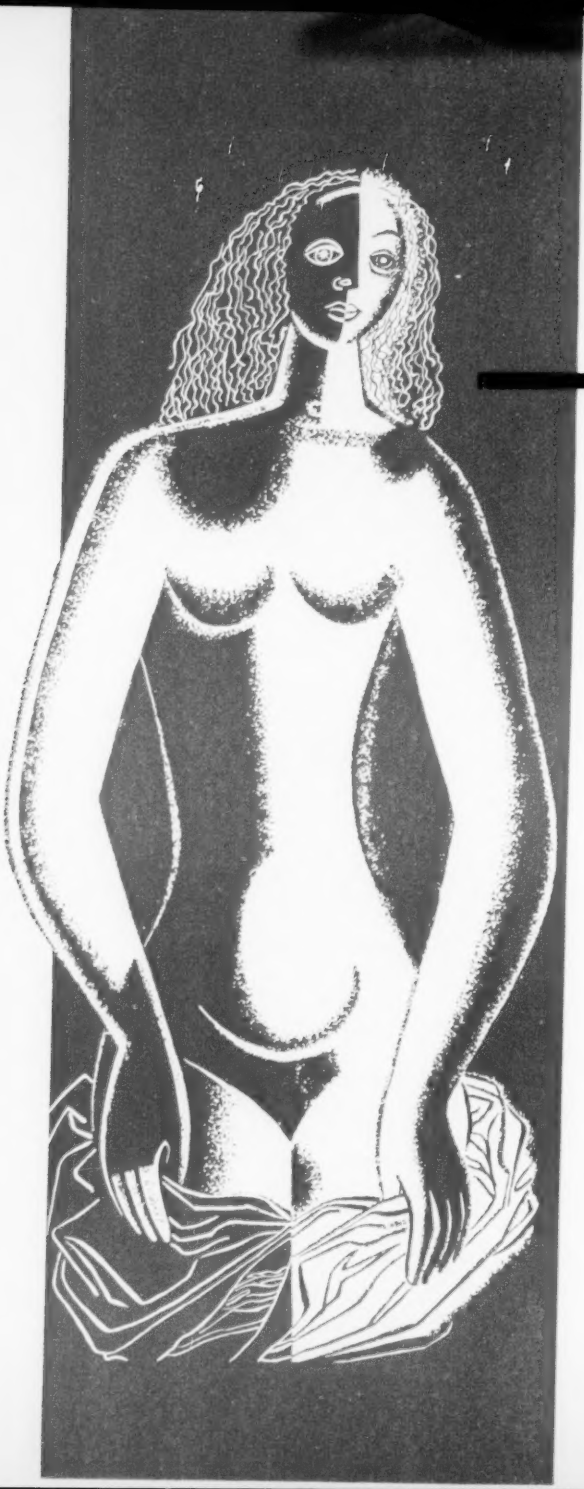

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1. *Lathrop, C. A., and Carlisle, W. T., Oral Toluidine Blue in the Treatment of Hypermenorrhea, Amer. J. Obst. & Gynec., 64:1370, December, 1952.*

2. *Rumbolz, W. L., Moon, C. F., and Novelli, J. C., Use of Protamine Sulfate and Toluidine Blue for Abnormal Uterine Bleeding, Amer. J. Obst. & Gynec., 63:1029, May, 1952.*

3. *Bickers, W., Toluidine Blue—An Evaluation in the Treatment of Uterine Bleeding, in press, Amer. J. Obst. & Gynec.*

Broad anatomic knowledge and experience are essential to avoid the many pitfalls. The common sites for recurrences involve the areas around the spermatic cord, medial and lateral, and the conjoined tendon. Inadequate dissection and repair under "too much" suture tension will immediately become an anlage for a recurrence.

• Nonabsorbable silk or cotton sutures are usually preferred. Wire sutures, screens, or plates may create additional foreign body hazards. A shift of a patient's own abdominal fascia is helpful in closing a serious hernial defect, particularly the direct type.

• The presence of a great deal of scar tissue during secondary repair mitigates against strong healing, particularly when the previous repair was complicated by bacterial contamination or low-grade infection.

• Successful hernial repair is favored by youth, but old age alone is not conducive to failure. Obesity, constipation, poor tissue turgor, fascial weakness, diabetes, chronic infections, anemias, urethral strictures, or enlarged prostates augment percentage failures and recurrences.

• Recurrent inguinal hernias may be approached intraabdominally and successfully repaired by suturing the transversalis fascia to the periosteum of the pubic bone. Care should be taken to close the defect snugly both medially and laterally to the spermatic cord. If necessary the cord can be severed without risk.

LEANDER W. RIBA, M.D.
Chicago

►TO THE EDITORS: True recurrence of an indirect inguinal hernia is usually caused by failure of complete dissection of the sac and an improper closure of the pelvic fascia about the opening at the internal ring. What is frequently believed to be a recurrence of indirect hernia is the development of a direct hernia or a pantaloon type of hernia, which is a combination of direct and indirect hernia. The basis for such recurrence is probably the same as that for a primary direct hernia.

Recurrence of a direct hernia is usually caused by surgical failure to obtain proper and adequate covering over the area of Hesselbach's triangle. Such failure may stem from an improper type of operation, such as the Bassini operation, or the use of weak or inadequate tissue to cover Hesselbach's triangle. Anatomically there is considerable space between the parietal peritoneum and the external oblique aponeurosis. In the region of Hesselbach's triangle, weakness is due largely to the failure of the internal oblique and transversalis muscles to cover the lower half of the triangle. When weakness is present, a Bassini type of operation amounts to little more than repair of the roof over the canal, leaving a poorly supported floor. Recurrence is common in such a situation.

The most satisfactory approach to recurring hernias would seem to be the application of the lateral tendinous margin of the rectus muscle to Cooper's ligament with interrupted sutures of fairly heavy silk

or other nonabsorbable material. In addition, the lower margin of the conjoined tendon should be approximated to Cooper's ligament similarly, making a fairly complete musculotendinous covering or floor for Hesselbach's triangle. Such an operation meets practically all requisites of adequate plastic surgery. The use of fairly heavy silk or other nonabsorbable sutures allows early mobilization of the patient without risk of wound dehiscence.

JACKSON K. HOLLOWAY, M.D.
Seattle

►TO THE EDITORS: The usual cause for recurrence of hernia is improper technic of operation.

Most hernias recur either at the internal ring or just above the pubic tubercle. The former are best prevented by high dissection and high obliteration of the sac, followed by removal from the cord of all structures other than essential vessels, nerves, and vas. Then the internal ring is meticulously reconstructed by suturing the transversalis fascia.

Low recurrences pose a different problem. Here, closure without tension is mandatory. After obliteration of the sac, all rents in the transversalis fascia are sutured. In direct hernias a well-defined anatomic variation is common. This consists of the lower fibers of the internal oblique muscle running in a nearly transverse direction, consequently inserting into the conjoined tendon some 2 cm. above the pubic tubercle. This leaves a triangular weak area in the floor of the inguinal canal. When these cases are repaired by bringing the conjoined tendon to Poupart's ligament, excessive tension invariably results, and when this situation exists, a crescentic flap should be reflected from the anterior rectus sheath and sutured to the inguinal ligament.

In repairing all inguinal hernias, a long vertical relaxing incision should be made in the lower part of the anterior rectus sheath beneath the external oblique aponeurosis, near the midline. This further minimizes tension.

Failure to remove all areolar tissue from structures to be sutured results in poor healing.

I feel that repair is strongest when the cord is brought into a subcutaneous position in adults. A technical variation which adds strength is to suture the lateral leaf of the external oblique fascia down to the conjoined tendon and internal oblique muscle, after which the medial leaf is sutured over the lateral. For best results nonabsorbable suture is essential—wire for adults, silk or cotton for children.

GEORGE V. ROSENBERG, M.D.
Abbeville, S. C.

► TO THE EDITORS: Several factors are involved in recurrent inguinal hernia; errors in technic are undoubtedly the most important.

Obliteration of the sac with high transfixion ligation of the neck and adequate repair of the defective posterior wall of the inguinal canal are first principles. Careful suture of the transversalis fascia is important but frequently neglected.

(Continued on page 164)

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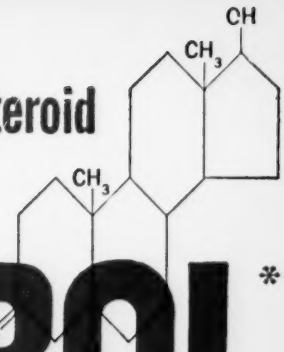

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Neodrol exhibits a relatively low incidence of virilizing side effects—unlike testosterone

The most distressing side effects of androgen therapy—hirsutism, acne, clitoral hypertrophy and increased libido—are less frequently encountered with Neodrol therapy and when present are usually slight in degree.

SUPPLIED: In multiple-dose (10 cc.), rubber-capped vials: 50 mg. per cc. *Trademark

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Restricted activity and frequent laboratory checkups are often a concern to the patient. You can return many hypertensives to a more normal life with Nitranitol. *Because of its low toxicity*, blood pressure is safely lowered—side effects are the exception rather than the expected. *Nitranitol acts directly* on the arterioles to produce gradual vasodilation. *It maintains lowered pressures* for prolonged periods.

Why not start your hypertensive patients on Nitranitol—the universally prescribed drug for essential hypertension?

This chart shows the blood pressure response you can produce for your hypertensive patients.

Nitranitol®

Merrell's safe, gradual, prolonged-acting vasodilator

Because of its direct action on the arterioles, Nitranitol provides SAFE, GRADUAL, PROLONGED vasodilation, now in 6 dosage forms.

Nitranitol
Mannitol hexanitrate **32 mg.**

Vasodilation plus sedation:
Nitranitol with Phenobarbital
Mannitol hexanitrate **32 mg.**
Phenobarbital . . . . . **16 mg.**

Protection in capillary fragility:
Nitranitol with Phenobarbital and Rutin*
with Rutin . . . . . **20 mg.**

When threat of cardiac failure exists:
Nitranitol with Phenobarbital and Theophylline*
with Theophylline . . **100 mg.**

For refractory cases of hypertension:
Nitranitol P. V.*
with Alkavervir . . . . . **1 mg.**
(A special alkaloidal fraction of Veratrum viride, biologically standardized for hypotensive activity.)

NEW
Nitranitol R. S.
. . . for direct vasodilation plus added hypotensive and sedative actions of RAUWOLFIA.
Mannitol hexanitrate . **32 mg.**
Rauwolfia serpentina . **0.5 mg.**

**Each contains Nitranitol 32 mg. and Phenobarbital 16 mg.*

DOSAGE: In blood pressures over 200 systolic, 2 tablets 4 times daily. In other cases, 1 or 2 tablets every 4 to 6 hours.

NOTE: *Nitranitol is exceptionally stable, assuring potency, so important in hypertensive medication.*

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for 125 Years.

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All sutures must be tied to approximate tissues without undue tension. Tightly tied sutures cut through the tissue, contributing to weakness of the repair and recurrence.

Healthy vigorous tissues are essential; atrophied fascia and muscle after long use of a truss may guarantee a recurrent hernia. Removal of excessive properitoneal fat and lipomas at and near the line of repair is an essential part of the operation.

Chronic systemic disease impairs healing, and chronic respiratory tract disease with cough will frequently "blow out" a recurrent hernia. Large defects in the posterior wall often require myoplastic or fascial graft repair to close the defect adequately without tension.

Age in itself is no contraindication to operation but aging tissues heal less well than those of youth. In this age of antibiotics, infection plays a small part in recurrent hernia. Failure to find a hernia is a gross error.

JOHN E. SUTTON, M.D.
New York City

►TO THE EDITORS: Recurrent inguinal hernia is accorded only brief mention in most textbooks on general surgery. However, 15% of all hernia patients who consult me have recurrences.

In a series of 2,250 inguinal hernia patients, 286 had recurrences after operations elsewhere. Among these, 25% developed hernia immediately after operation; 28% in the first six months; 30% in six months to five years; and 15% in ten to thirty years. Few clinics observe patients beyond five years. Patients who have immediate or early recurrences usually return to the surgeon who performed the original operation, while those who have late recurrences, five to fifteen years after the operation, seldom return to the first operator.

The most frequent causes of recurrence are: failure to remove all the sac; faulty methods of closure; inguinal lipomas; double, saddlebag, or pantaloon sacs; postoperative rest; poorly developed musculature; obesity; faulty blood supply; division of nerves; suture material; poor general health; bilateral hernia operations; asthma; postoperative complications; intraabdominal pressure; and wound infection.

Recurrent indirect hernia—Although most recurrent hernias are direct, many are indirect, especially if the first operation failed to remove all the sac and closure of the wound was faulty.

The recurrence rate for direct hernia operations is 10 to 20% in the hands of the most experienced surgeons. Many report it between 25 and 50%.

After the Bassini operation, indirect inguinal hernia most frequently recurs through the opening left for the cord. Occasionally the recurrence comes through the deep suture line just above the pubis, and sometimes, although rarely, through the middle of the deep suture line or a weak spot in the muscles or fascia.

Babcock, in 1927, recognized the many advantages of suturing the fascia to Cooper's ligament.

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OF THE AMERICAN MEDICAL ASSOCIATION

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These Tasti-Diet brand dietetic foods take much of the hardship out of "dieting." They provide the very foods obese and diabetic people usually crave most—luscious fruits (packed in sweet, syrup-like liquid) and tasty jellies.

The low caloric contribution of these foods—as much as 76 per cent less than their conventional counterparts—is due to processing without the addition of sugar.

Except for the two non-sweetened items above, they are texturized with fruit pectin and sweetened with small amounts of saccharin or Sucaryl®. They are available at local food stores, without price penalty.

Physicians are invited to send for representative samples of the foods listed and literature.

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Tillie Lewis, President

The operation preserves the normal unhampered action of the fascia and muscles of the inguinal region. It is now known that the Bassini operation interferes with normal movement and thus weakens the lower abdominal wall, favoring rather than preventing recurrence.

Since the lower fibers of the transversalis and internal oblique fascia are normally attached to the fibrous covering of the pubic bone, Cooper's ligament, and not to the inguinal ligament, it is logical to adopt the suggestion of Babcock and suture the inferior aponeuroses of the internal oblique and transversalis muscles to Cooper's ligament. The Cooper's ligament operation is more correct from the anatomic and physiologic standpoint. Ordinarily, when transversalis fascia is sutured to the inguinal ligament, a pocket or gap is left. This becomes a potential recurrent hernia, often before the patient leaves the operating table.

Cooper's ligament operation has many modifications. In most of these, Cooper's ligament sutures are used in combination with the usual Bassini procedure. Prof. R. Bastianelli of Rome told me recently that the more painstaking a surgeon is with the Bassini operation the fewer will be the recurrences.

Direct inguinal hernia—Many surgeons make the mistake of trying to adapt the indirect hernia operation to a direct hernia. This accounts to some extent for the high recurrence rate associated with direct hernia operations.

LEIGH F. WATSON, M.D.
Los Angeles

"No, I don't know what they're showing, but they say it's free!"

ILOTYCIN (ERYTHROMYCIN, LILLY), CRYSTALLINE, TABLETS—100 or 200 mg. per tablet.
Dosage: 200 mg. every four to six hours.

New **ILOTYCIN-SULFA TABLETS**—50 mg. 'Ilotycin' plus 0.33 Gm. mixed sulfonamides* per tablet. Dosage: 3 tablets four times daily.

ILOTYCIN, ETHYL CARBONATE, CRYSTALLINE, PEDIATRIC—Taste-Tested by Junior Panel—100 mg. 'Ilotycin' per teaspoonful (5 cc.). Dosage: Thirty-pound child, 1 teaspoonful every six hours; others, in proportion to weight. In 60-cc. bottles.

New **ILOTYCIN-SULFA, FOR ORAL SUSPENSION**—Taste-Tested by Junior Panel—100 mg. 'Ilotycin' plus 0.5 Gm. mixed sulfonamides* per teaspoonful (5 cc.). Dosage: Thirty-pound child, 1 teaspoonful every six hours; others, in proportion to weight. In 60-cc. bottles.

ILOTYCIN, CRYSTALLINE, OINTMENT—10 mg. per Gm; Dosage: Apply to the affected area three or four times daily. In ½-ounce tubes.

*Equal parts of sulfadiazine, sulfamerazine, and sulfamethazine.

Lilly

THE ORIGINAL OF ERYTHROMYCIN

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-251

THE CLUE

ATTENDING M.D: I have just had an emergency telephone call from a doctor who is sending a 35-year-old woman with left lower abdominal pain to the hospital by ambulance. Her pain began suddenly a week ago while reading.

VISITING M.D: What was the character of the pain?

ATTENDING M.D: Crampy, lower abdominal, particularly on the left. The first attack lasted about forty-five minutes and was accompanied by nausea and vomiting. She had a second attack four days ago and her physician was unable to make a diagnosis. A third attack the next day was induced by a pelvic examination in the doctor's office. He made a plain film of the abdomen and referred the woman to our gynecologist. Here is the roentgenogram which arrived by mail yesterday.

VISITING M.D: *(Examining roentgenogram)* A rather indefinite hazy density in the pelvis. Looks like fluid to me. The walls of the abdomen are somewhat convex. The bladder shadow is separate and not indented. There is gas in the bowels and they are not distended. I cannot delineate the abdominal viscera. Has she any children?

ATTENDING M.D: Yes, 3, no miscarriages or abortions. Her menstrual periods have always been regular and the last one was three weeks before the present illness. A fourth attack two hours ago has not subsided. *(Voice over loud-speaker calls the Attending Physician to the emergency room. Both physicians go.)*

PART II

VISITING M.D: *(Examining patient)* There is considerable voluntary abdominal spasm; palpation is

(Continued on page 174)

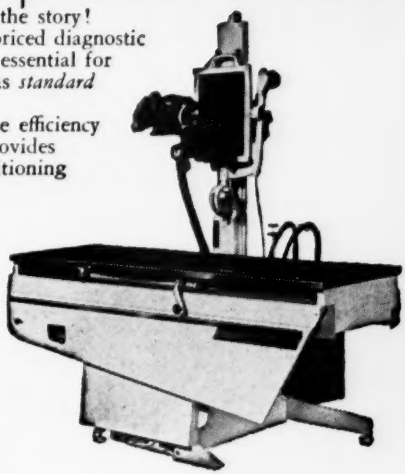
No other low-priced x-ray unit includes all these diagnostic "musts"!

FEATURE	MAXICON ASC	UNIT X	UNIT Y	UNIT Z
Table positions from 10° Trendelenburg to vertical	YES	YES	NO	YES
Variable speed table angulation	YES	NO	NO	NO
Radiation-protective table panels	YES	NO	NO	NO
18-in. focal-spot to table-top distance for fluoroscopy	YES	NO	NO	YES
Counterbalanced tube stand, providing adjustable focal-film distances up to 40 in.	YES	NO	NO	NO
Signal-light centering system for Bucky radiography	YES	NO	NO	NO
Provision for cross-table radiography	YES	NO	NO	NO
12-step line-voltage compensator	YES	NO	NO	NO
Automatic selection of large or small focal spot	YES	YES	NO	NO
45 x 78-in. or less space requirement	YES	NO	NO	NO

YES, the comparison chart tells the story! Maxicon ASC is the only low-priced diagnostic unit that gives you all ten features essential for both fluoroscopy and radiography as *standard* equipment . . . not extras.

Remember, too, you get two-tube efficiency at one-tube cost. Maxicon ASC provides over-and-under the table tube positioning easily, compactly, economically.

If you're in the market for a diagnostic unit, make this comparison yourself. Ask your GE x-ray representative to demonstrate Maxicon ASC's clear superiority. Or write X-Ray Department, General Electric Company, Milwaukee 1, Wisconsin, for Pub. G-11.



You can put your confidence in —

GENERAL ELECTRIC

a 3-way attack on intranasal infection

'Drilitol' provides

1. double antibiotic action

'Drilitol' contains 2 antibiotics—anti-gram-positive gramicidin and anti-gram-negative polymyxin—to attack bacterial infection.

2. decongestive action

'Drilitol' contains the vasoconstrictor—Paredrine† Hydrobromide—to relieve intranasal congestion.

3. anti-allergic action

'Drilitol' contains the antihistaminic—thenylpyramine hydrochloride—to counteract local allergic manifestations.

'Drilitol' is indicated for the treatment of common upper respiratory tract disorders such as: rhinitis, nasopharyngitis, bacterial colds, sinusitis, coryza and allergic rhinitis.

Drilitol*

antibiotic, decongestive, anti-allergic

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*T.M. Reg. U.S. Pat. Off.
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in prescribing,

be sure to specify:

'Drilitol Spraypak'

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Drilitol Spraypak
spray 3 or 4 times in
each nostril every 3 hours

OR

'Drilitol' Solution

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Drilitol Solution
1 dropperful in each nostril
4 or 5 times a day

quite unsatisfactory. Results of the general physical examination except for the abdomen are normal. The pain is quite severe. The abdomen is protuberant, but there is no shifting dullness. The lower abdomen is very tender, especially on the left. I cannot feel any mass, even by pelvic examination, but the spasm interferes although she is quite thin. *(To the patient)* Have you lost any weight?

PATIENT: No.

ATTENDING M.D: The blood pressure is 100/70 and the temperature normal. I have ordered morphine, and complete blood study and a catheterized urine study.

VISITING M.D: *(In the hall)* I could not outline the uterus.

ATTENDING M.D: I have just spoken to the referring physician on the phone again. He says that the patient has noted some abdominal swelling for two months. I spoke to the woman's husband, who accompanied her. The patient has not had any serious illness in the past or any operation. She felt well until a week ago. The referring physician said that he thought she might have appendicitis, diverticulitis, or regional enteritis.

VISITING M.D: She has had no previous bowel symptoms, blood in the stool, and midabdominal tenderness, such as accompany regional enteritis. With ascites but no changes in bowel function I doubt if she has diverticulitis. The illness is acute and I am not inclined to entertain the diagnosis of primary or metastatic cancer despite the two months' swelling. I think we can forget the upper abdomen and concentrate on the pelvis.

ATTENDING M.D: *(In the patient's room)* The emergency laboratory reports are here. The urinalysis is normal. . . .

VISITING M.D: And we can dismiss the urinary tract.

ATTENDING M.D: White cell count is 20,000 with 92% polys. No eosinophils.

PART III

VISITING M.D: Ruptured ectopic pregnancy is a possibility despite recent normal menstruation.

ATTENDING M.D: But there is no mass, palpable or seen; the films show only fluid and there is no sign of abdominal hemorrhage.

VISITING M.D: Correct. Yet, I doubt if one could feel a mass with so much spasm. A twisted uterine

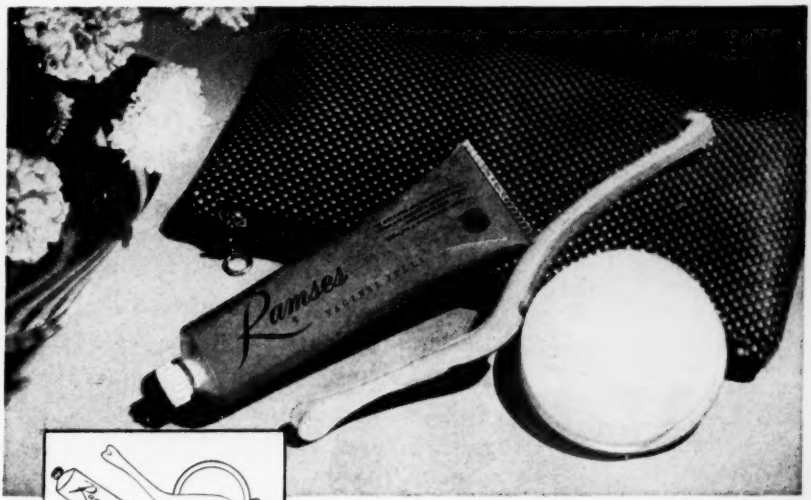
(Continued on page 180)

"Oh, that? George's doctor advised him not to walk upstairs!"

For the ultimate in modern conception control...

... authorities agree that there is no better method than the combined use of an individually fitted vaginal diaphragm and a safe spermatocidal jelly with long-lasting barrier effectiveness.[1,2]

In specifying a suitable diaphragm and jelly for your patients, you cannot do better than to prescribe the popular RAMSES® TUK-A-WAY® Kit (Physician's Prescription Packet No. 701). It provides all the essentials for optimum conception control in a convenient plastic kit, easily stored at home or when traveling. Each kit contains a RAMSES Flexible Cushioned Diaphragm of prescribed size, a diaphragm introducer of corresponding size, and a regular-size (3-oz.) tube of RAMSES Vaginal Jelly.*



When physical or other factors contravene the use of the combined technic, RAMSES Vaginal Jelly alone will provide a high degree of protection, without injury or irritation.

1. Report to Council on Pharmacy & Chemistry, A.M.A.: J.A.M.A. 148:50, 1952. 2. Dickinson, R. L.: Techniques of Conception Control, ed. 3, Baltimore, Williams & Wilkins Company, 1950, p. 21.

*Active ingredients, by weight: Dodecaethyleneglycol monolaurate 5%; boric acid 1%; alcohol 5%.

gynecological division

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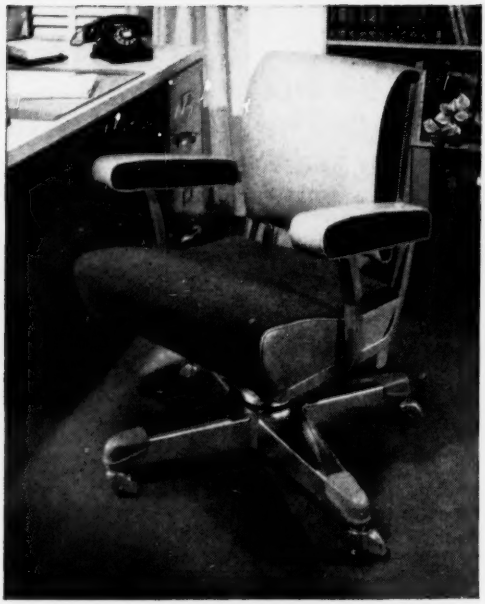
quality first since 1883



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- *Distinctive two-tone upholstery combines fine Royalpoint weave with durable Super-Tuftex vinyl plastic.*
- *"Floating" back follows body, raises or lowers easily to best position for your personalized comfort.*
- *Precision tilt-and-swivel mechanism adjusts seat height, back height, seat tilt and back tilt tension through simple, flawless, accessible controls.*
- *Hooded, soft rubber ball bearing casters. Rubber kickplates on streamlined island base protect satin finish.*

We prescribe this handsome, precision-built chair for genuine comfort and a lifetime of flawless use in your office. It is a chair that lends prestige to your position, smartly designed and custom finished in lustrous Royal Plastelle finish on square tubular steel. For matching units, and other fine metal furniture, write for free Royal catalog today!

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new dosage form

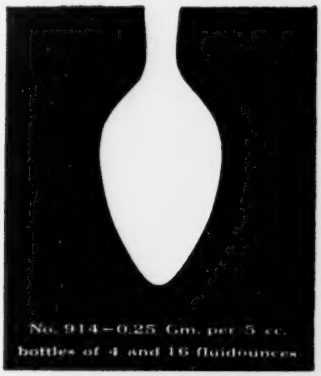
"THIOSULFIL"®

brand of sulfamethylthiadiazole

the outstandingly effective sulfonamide

in urinary tract infections

now available in **SUSPENSION**



No. 914—0.25 Gm. per 5 cc.
bottles of 4 and 16 fluidounces

- **greater solubility**
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- **minimum toxicity**
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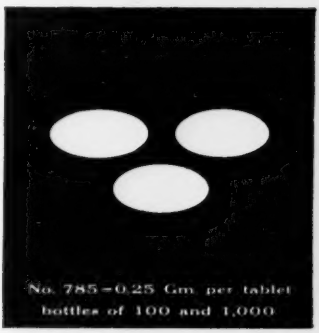
also **TABLETS**



No. 785—0.25 Gm. per tablet
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Detailed literature giving complete dosage regimens is available to physicians.

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The loneliest adolescent of all...needs

'MELOZETS'

METHYLCELLULOSE WAFERS*

Overweight adds many hurts and frustrations to the perplexingly difficult years of adolescence. You can help these youngsters lose weight when you prescribe 'MELOZETS' as an adjunct to a low-calorie diet.

A most important value of 'MELOZETS' is that they are a "drugless" help to any reducing regimen.

'MELOZETS' look and taste like graham crackers. Each wafer contains 1.5 Gm. of methylcellulose and supplies about 30 calories. 'MELOZETS' give a sense of satisfying fullness—blunt the appetite.

EASY TO EAT: A wafer with a glass of fluid, between meals or one-half hour before meals.

SUPPLIED: By pharmacists in ½-lb. boxes of about 25 wafers.

FREE DIET SHEETS

For a pad of sheets, each with 42 different 'MELOZETS' reducing menus, and a sample of 'MELOZETS,' drop a note on your prescription blank to Professional Service Dept., Sharp & Dohme, West Point, Pennsylvania.

**Patent applied for*

PHOTOGRAPH BY RUZZI GREEN

fibroid would produce the pain, tenderness, and leukocytosis but I don't think it would have caused the ascites.

ATTENDING M.D: If she has ascites.

VISITING M.D: You feel that the fluid might be blood?

ATTENDING M.D: Yes. What about salpingitis?

VISITING M.D: If this were salpingitis there should be fever. Salpingitis would not explain the two-month abdominal swelling. I am inclined to think that this woman has a ruptured ectopic pregnancy.

ATTENDING M.D: I will hazard a different diagnosis.

VISITING M.D: Good, I think I know what you have in mind. . . .

ATTENDING M.D: A ruptured cyst. That could account for the increasing size of the abdomen. The rupture could have occurred before the roentgen examination. If the pedicle remained twisted, the pain would continue. The contents of the cyst could explain the abdominal fluid.

VISITING M.D: We shall see.

PART IV

GYNECOLOGIC SURGEON: *(Examining patient in operating room under anesthesia)* The uterus is about 3 times the usual size and there is a mass in the left cornu attached to the uterus. I will open the abdomen.

VISITING M.D: This is a very instructive case, for it emphasizes the importance of an adequate pelvic examination with anesthesia if the usual examination is unsatisfactory. The earlier this is done, the more valuable.

SURGEON: There is quite a bit of fresh and old blood in the abdomen, perhaps a liter. What was her hemoglobin?

ATTENDING M.D: It was 13 gm. per cent.

SURGEON: Has she been blood-typed?

ATTENDING M.D: Yes.

SURGEON: Here in the region of the left cornu is a ruptured ectopic pregnancy. I should estimate the fetus to be 3 months old. It shows once again how we must not be misled by an occurrence of presumably normal menses or by previous normal pregnancies.

ATTENDING M.D: Why do you suppose she had an ectopic pregnancy?

SURGEON: I can only guess. It doesn't look like an ordinary salpingitis, but sometimes a salpingitis called isthmica nodosa occurs in the cornual end of the tube. Other times there may be a diverticulosis of the tube or penetration of the tubal epithelium into the muscularis resembling adenomyosis of the uterus.

"The pain comes on every five minutes and lasts—well a quarter of an hour at least."

clinically accepted for treatment of **HYPERTENSION**

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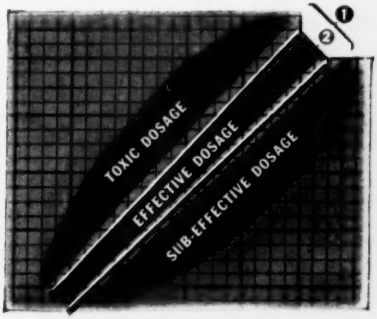
(Brand of Protoveratrines A and B)

Recent clinical investigations show that protoveratrine produces a significant decrease in systolic and diastolic blood pressures. With adequate dosage, this well-tolerated veratrum derivative can often maintain blood pressure near normal levels indefinitely, and alleviate such symptoms as headache, insomnia, delirium, dizziness, and blurred vision.

Effective dosage for the individual patient can usually be readily established with Veralba, which is available in both 0.2 mg. and 0.5 mg. grooved tablets.

Write for literature and "dose-establishment" package



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❶ The therapeutic range of protoveratrine is narrow. Hence, continued response to established dosage requires an accurately-standardized dosage form.

❷ Veralba is the only protoveratrine preparation standardized by *chemical assay*. The potency of Veralba Tablets is not permitted to vary from lot to lot by more than 3%, plus or minus.

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SHORT REPORTS FROM ABROAD

SWITZERLAND

Platelet Extract for Internal Hemorrhage. In visceral hemorrhages of nonthrombopenic origin, good results may be obtained by intravenous injection of a platelet extract.

Dr. E. Strehler of Berne University announces very encouraging results in 50 cases, with particularly gratifying responses in tuberculous hemoptysis and in bleeding from peptic ulcers. The extract appears to affect the second stage of coagulation and activates the coagulation mechanism in healthy individuals as well. However, no thrombosis has been observed after the injections.

2

Serodiagnosis of Syphilis. The Nelson test, which is based on the in vitro immobilization of *Treponema pallidum* by the serum of the patient with syphilis, will confirm the diagnosis of syphilis when other more conventional methods show only doubtful or nonspecific serologic or false negative reactions. The test is also of great value in follow-up studies of treated syphilis in which the usual tests are often equivocal.

Drs. H. Jaeger and J. Delacrétaz of the University of Lausanne stipulate that this test can be considered as a biologic reaction strictly specific for the treponematoses—syphilis, yaws, or pinta. On the basis of 500 examinations, the authors come to the conclusion that the results of the Nelson test are regularly negative in the absence of syphilis and that the diagnosis of syphilis can be excluded in cases of doubtful or dissociated serology if a negative result is obtained. The test is of no special value in cases of recent syphilis, since positive reactions do not appear as early as with other conventional serologic tests.

AUSTRIA

Symptoms after Encephalography. Because of slow absorption of the injected air from the ventricles and subarachnoid space, patients may have discomfort for several days after an encephalographic examination. To reduce these symptoms, Dr. Hermann Lenz of Linz suggests using the cisternal approach instead of the lumbar, and oxygen or nitrous oxide instead of air; these gases are absorbed about 4 times faster than air. Filling the

(Continued on page 186)

A *Leeming* First:

the **New** *coronary vasodilator*

Metamine®

Leeming brand of triethanolamine trinitrate biphosphate

more effective in angina prevention

than other coronary dilators. When taken routinely, METAMINE prevents anginal attacks or greatly diminishes their number and severity. In addition, METAMINE is apparently nontoxic, even in prolonged or excessive dosage.

there is a reason

METAMINE is chemically distinct from all other organic nitrates in that it has a nitrogen, rather than a carbon linkage. This perhaps explains its outstanding effectiveness and freedom from side effects.

Dosage: METAMINE is effective in a dosage of **only 2 mg.** To prevent anginal attacks, swallow 1 METAMINE tablet after each meal, and 1 or 2 tablets at bedtime. Full preventive effect is usually attained after third day of treatment.

Supplied: METAMINE tablets, **2 mg.**, vials of 50.

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MOST of Your Patients are probably sure that at least one evacuation of the bowels every twenty-four hours is necessary for their well-being. In attempting to achieve this many inevitably develop the laxative habit.

For weaning patients from dependence on laxatives, a valuable adjunct to your dietary and other regulatory recommendations is Haley's M-O.

Haley's M-O is an intimate and homogeneous blending of Phillips' Milk of Magnesia with mineral oil of highest quality. It combines the gentle laxative action of magnesium hydroxide with the lubricating and emollient properties of mineral oil. The minute subdivision of the oil globules assures uniform distribution and mixture with the intestinal contents—and avoids oil leakage. Thus a comfortable evacuation is produced by stimulating the normal intestinal rhythm and the blunted defecation reflex.

The dosage of Haley's M-O is easily adjusted to individual requirements and can be gradually reduced until the laxative habit has been overcome and there is no longer need for the gentle help of Haley's M-O.

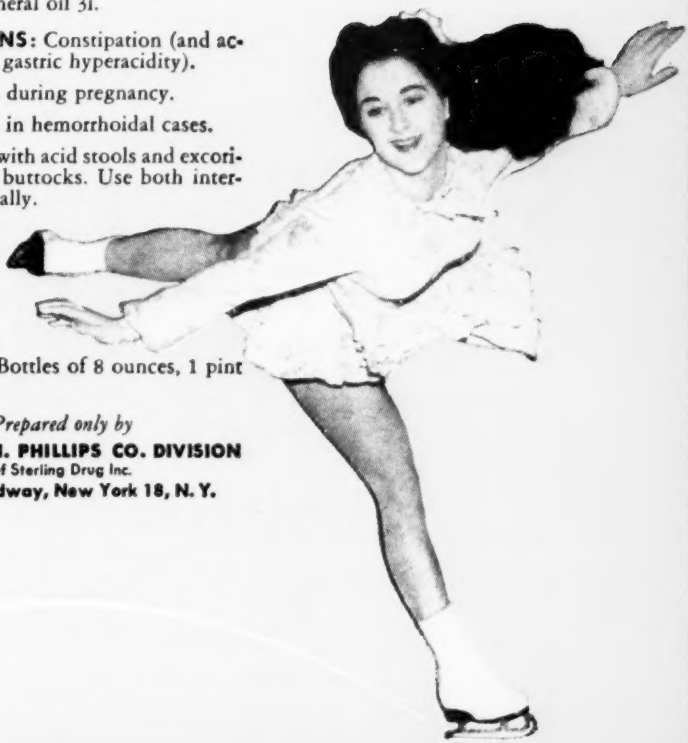
FORMULA: Each tablespoonful contains Phillips' Milk of Magnesia 3iii and pure mineral oil 3i.

INDICATIONS: Constipation (and accompanying gastric hyperacidity).

Constipation during pregnancy.

Constipation in hemorrhoidal cases.

For children with acid stools and excoriation of the buttocks. Use both internally and locally.



SUPPLIED: Bottles of 8 ounces, 1 pint and 1 quart.

Prepared only by

THE CHAS. H. PHILLIPS CO. DIVISION
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ventricles with oxygen or nitrous oxide is particularly simple by the cisternal approach. Because of the negative pressure in the cisternal space, oxygen will be aspirated if the tubing from the tank is held in front of the opening of the needle.

ITALY

Roentgen Therapy for Uveitis. In all forms of uveitis, particularly those of a chronic type or for which other methods are ineffective, roentgen treatment may be of benefit, find Drs. Q. Di Marzio and A. Strozzi of the University of Bologna. A report is given of 832 patients treated by roentgen rays for uveitis of various types, but predominantly tuberculous, luetic, rheumatic, or infectious.

The results were: recovery in 45%, improvement in 36%, and failure in 17.5%.

Irradiation consists of a course of four to six applications with very hard rays given at intervals of five to six days. The first effects of treatment, clarification and decongestion, are visible after two or three applications. Photophobia usually disappears within a few days.

Results are almost the same for all types of uveitis. Speed of response to therapy, however, varies; tuberculous lesions respond the most rapidly, the luetic next, and finally the rheumatic.

PEDIATRICS BULLETIN

Prepared In The Interests Of The Profession By The Pediatrics Consultant Staff Of H. J. Heinz Company

Inadequacy of X-ray in **Foreign Bodies in Lung**

THE possibility that a non-radio-opaque object like a peanut has been aspirated causes one of the great diagnostic emergencies in childhood. Immediate decision is crucially important to justify the serious but essential bronchoscopy. It is instinctive for the doctor to turn to X-ray for aid, but, we have learned, uncritical reliance on this aid may lead to tragic mistakes.

● **Bronchial foreign bodies** in children most commonly result first in obstructive emphysema. A film, however, taken only on inspiration, may give no indication whatever that a bronchus is almost but not quite occluded. The obstruction may be of just such a degree that on full or even partial inspiration, abnormal and normal lobes are equally distended. Only on expiration can the lobe, distended by trapped air, be detected; and in young children it may be difficult to get a film at just this moment.

● **Many pediatricians** find the stethoscope is often more accurate than the X-ray. In this, of course, we must bear in mind that it is essential (1) repeatedly to compare with the stethoscope the volume of breath sounds on different areas of the chest, (2) to insist that two X-rays be taken, one on full inspiration and one on full expiration.

NOTE: These bulletins are designed to help disseminate modern pediatrics knowledge to the general medical profession and will appear monthly in Modern Medicine.

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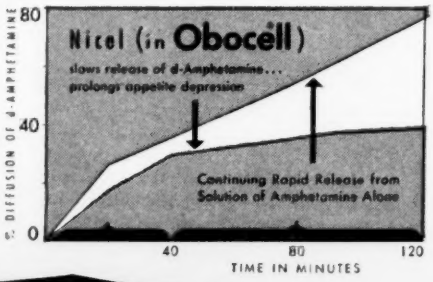
No overstimulation or overdelay

prompt at meals . . . sustained between meals



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Obocell ideally checks appetite and hunger *before and between meals.* A rapid, short-acting phase of drug release curbs appetite before meals. Nicel* sustains control by "rationing" medication between meals. In addition, Obocell prevents gnawing bulk hunger which so frequently prompts patients to violate diets.

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Dextro Amphetamine Phosphate	5 mg.
Nicel*	150 mg.

*Nicel — Irwin-Neisler's Brand of High Viscosity Methylcellulose.

Supplied: Bottles of 100, 500, 1000.

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FRANCE

Results of Pneumonectomy. The eventual outcome of pneumonectomy in case of extensive unilateral tuberculous lesions often depends on careful preoperative evaluation of the general status of the patient as well as of the indications for operation and possible functional results.

Dr. Bérard and associates of Lyon report a five-year study of 350 pneumonectomies performed for tuberculosis.

Of the 350 patients, 99 patients were dead and 6 others could not be traced.

In 207 cases the results were very good; 93% of the patients were able to lead normal lives and had no symptoms except dyspnea. Only 17 still had dyspnea on exertion.

Thoracoplasty as a secondary procedure had to be performed for 25 of the 207 patients.

In 38 cases, the results were equivocal.

A progression of the tuberculous process in the contralateral lung was found in 30 cases, chiefly among patients who already had bilateral involvement at the time of pneumonectomy.

Contralateral lesions developed in only 9 of the patients who had unilateral lesions at the time of surgery.

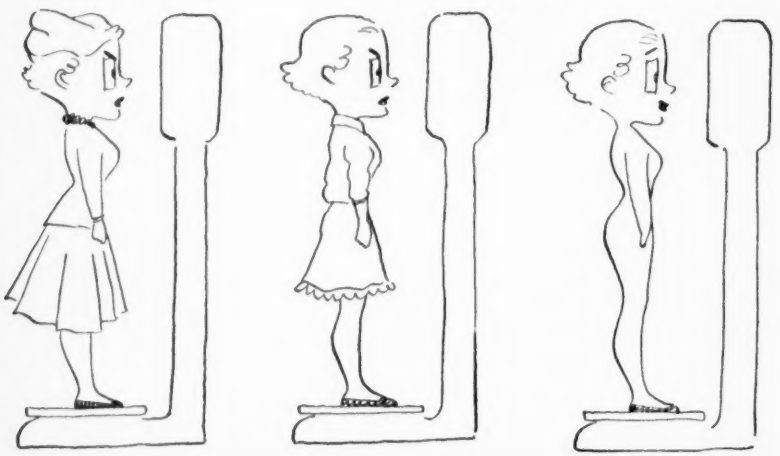
GERMANY

Prolonged Sedation without Barbiturates. Portafin may be of value to replace barbiturates when prolonged dosage is necessary, particularly for elderly patients. The preparation, alpha-monobrom-isovalerianylcarbamide and alpha-isopropyl-brombutyramid, apparently gives adequate sedation without depressant action. Dr. Klaus Aebert of Eickelborn Mental Hospital, Westphalia, has investigated use of the drug for patients with arteriosclerotic anxieties, senile and menopausal psychoses, and neurovegetative hyperirritability. Portafin may be administered in large doses without side effects and may be used for daytime or nocturnal sedation. The disagreeable smell and taste of the tablets are easily disguised if the medication is taken with food.

2

Respirator Therapy in Poliomyelitis. Significant correlation is evident between delay in getting a poliomyelitis patient into a respirator and mortality.

In determining the indications for transfer to a respirator, such subjective criteria as dyspnea or cyanosis are less important than the following conditions, any one of which indicates sufficiently serious interference with air exchange to warrant the use of a respirator: [1] vital capacity of less than 25% of normal, [2] a more than doubled respiratory rate, and [3] a carbon-dioxide content of exhaled air of over 4.5%. These observations are made by R. Aschenbrenner and Drs. A. Dönhardt and K. Foth of the General Hospital, Hamburg, who treated a total of 105 patients in the years 1947-52 in different types of respirators. The total mor-



when nutritional well-being is in the balance

tip the scale
in your patient's favor

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KAPSEALS®

comprehensive multivitamin therapy

dosage: For the average patient, 1 ABDEC Kapseal daily. During pregnancy and lactation, 2 Kapseals daily. Three Kapseals daily are suggested for patients in febrile illness, for preoperative and postoperative patients, and for patients in other situations in which vitamin deficiencies are likely to occur.

each ABDEC Kapseal contains:

Vitamin A	10,000 units	Vitamin B_6 (pyridoxine hydrochloride)	1.5 mg.
Vitamin D	1,000 units	Vitamin B_{12}	2 mcg.
Mixed Tocopherols (vitamin E factors)	5 mg.	Pantothenic Acid (as the sodium salt)	5 mg.
Vitamin B_1 (thiamine hydrochloride)	5 mg.	Nicotinamide	25 mg.
Vitamin B_2 (riboflavin)	3 mg.	Vitamin C (ascorbic acid)	75 mg.

ABDEC Kapseals are supplied in bottles of 50, 100, 250, and 1000.

MEDICAMENTA VERA

Parke, Davis + Company

tality, not including late deaths but including patients received in the hospital in extremis, was 61%.

During the postwar years, particularly after the poliomyelitis epidemics in 1948, respirator therapy received new impetus in Germany. Machines from the United States and Great Britain were used and several types of respirators were manufactured in Germany. The tank type of respirator *(Drinker)* appears to be the most useful for long periods of treatment. The chest type and electrophrenic respirators have greatest use in weaning patients from the iron lung and in taking some of the work load from the tank respirators.

The latest German tank respirator has an advantage over the conventional American model in that the patient may be turned with the entire tank along the longitudinal and transverse axes, thus assuring greater comfort and a more physiologic distribution of weight, as well as having hemodynamic advantages. An important

"But Doctor, how can I give him his medicine when he won't take his space helmet off?"

for simple,
effective
conception control

with measured-dose
applicator

Ortho

multiple sulfonamides*
for maximum effectiveness
in vaginal therapy

Triple Sulfa Cream
TRADE MARK

clinically proved

following cervical cauterization[1]

following conization
and vaginal plastic operations[2]

in routine postpartum care[3,4]

On original prescription specify
"with applicator."
Also available: "Tube only" refills.

Ortho

*Sulfathiazole,
N'acetylsulfanilamide,
N'benzoylsulfanilamide,
Urea Peroxide.

1. Blinick, G.; Steinberg, P. and Marendino, J. V.: Am. J. Obst. & Gynec. 58:176, 1949.
2. Marbach, A. H.: Am. J. Obst. & Gynec. 55:511, 1948.
3. Palm, J. M.: Am. J. Obst. & Gynec. 61:680, 1951.
4. Dickens, H. O.; Cave, S., and Burt, H.: Pan Am. M. Woman's J. 59:7, 1952.

modification in the *Dräger* respirator is a different front, which provides airtight closure along the collarbones and shoulder muscles. This facilitates access for tracheotomy.

The maintenance of a patient in a respirator over prolonged periods raises many problems. The physiologic problems concern pressure changes in the respiratory passages, avoidance of undue interference with the patient's hemodynamics, and fluid and ionic equilibrium. Nursing problems consist of proper bed care and the prophylaxis of contractures and overstretching of muscles.

In addition to the patients who died in respirators, 28 died en route to the hospital. This would argue for wider dispersion of available apparatus. However, experience has shown that, for greatest efficiency, the respirators should be centralized and the central institution staffed with highly specialized personnel. Such an arrangement requires an effective organization for rapid and atraumatic transportation of patients to the respirators. Plans made with the Hamburg fire department provide mobile iron lungs for transportation of patients to hospitals, while outlying communities are served by smaller units carrying less cumbersome emergency respirators.

LATE REPORTS *from Medical Centers*

★ YALE UNIVERSITY, New Haven, Conn.--Clues to cancer may be provided by the ability of reticuloendothelial cells to remove radioactive phosphorus from the blood. Rate of disappearance after injection of chromium phosphate was measured by Dr. John H. Heller and associates. Although function of reticuloendothelial cells is changed by light doses of radiation, structure is apparently unaffected. Generally, tumor cells are 20% more sensitive than normal cells to treatment.

★ UNITED STATES NAVAL HOSPITAL, St. Albans, N. Y.--Needles that deposit radioactive phosphorus in a tumor and then dissolve in body fluids have been tested on experimental animals. The needles permit radiation that will destroy malignant tissues at any desired location with little damage to adjacent tissues. The method may be used under conditions where other forms of radiation therapy are not feasible, reports Dr. H. C. Dudley. The needles are made of a mixture of germanium dioxide and titanium phosphate. The nontoxic germanium compound is relatively unaffected by radioactivity and is slowly dissolved and eliminated by the body. The titanium compound, containing radioactive phosphorus, lasts about fourteen days and is safe to use with little shielding.

★ VETERANS ADMINISTRATION CENTER, Los Angeles--Clots in coronary arteries of dogs can be dissolved by crystalline trypsin injected intravenously. Such treatment decreases the area of myocardial damage, improves abnormal electrocardiograms, and reduces mortality, report Dr. C. M. Agress and associates.

★ UNIVERSITY OF WISCONSIN, Madison--Dextran-like substances known as levans, which are formed by bacterial action in soil, may be suitable as plasma extenders. Several varieties have been extracted from cultures by Dr. Chester E. Holmlund and associates. The most promising compound, levan No. 248, causes no adverse effects on rabbits and remains in the blood much longer than commercial dextran.

★ UNIVERSITY OF CALIFORNIA AT LOS ANGELES--By a simple, inexpensive method, microscopic specimens can be photographed for an ordinary stereoscopic viewer or 3-D still screen projection. The technic is particularly well suited to low-power range, as in entomologic or certain medical and dental investigations. Dr. Roy Pence employs a single-view camera in fixed position. The stage with mounted specimen is tilted to correspond with 8 degrees of visual convergence, and pictures are made from left and right. Great focal depth is provided by a specially designed iris diaphragm.

★ JOHNS HOPKINS UNIVERSITY, Baltimore--Blindness with advanced diabetes and old age may be related to loss of power to absorb vitamin B_{12}. Urinary excretion of the vitamin was measured by Dr. Bacon F. Chow, in some instances after administration of radioactive doses. Diabetic patients with retinopathy excreted about 19 micrograms, those without eye lesions 4.2 micrograms, and healthy subjects 9.6 micrograms. The patients with early retinitis showed definite need of vitamin B_{12}.

★ NATIONAL HEART INSTITUTE, Bethesda, Md.--A powerful hypotensive compound with short action was recently extracted from rhododendron by Dr. Evan C. Horning and associates. About 1 oz. of pure andromedotoxin was obtained from more than 1,000 lb. of leaves. Dr. Neil C. Moran and A. P. Richardson observed effects on animals at Emory University, Atlanta. Exact composition is unknown. No nitrogen is included, but activity resembles that of the veratrum alkaloids.

short REPORTS

Tests

Diphenylamine Reaction in Rheumatic Fever

An unidentified reactor to diphenylamine found in the blood is increased in amount by some sterile inflammatory reactions. In children, Dr. A. F. Coburn and associates of Northwestern University, Chicago, find that the concentration reaches a peak during or shortly after the height of the acute phase of rheumatic fever. Similar augmentation occurs after experimental production of anaphylactic arthritis in guinea pigs. Serial determinations parallel the erythrocyte sedimentation rate in rheumatic fever and are helpful in estimating the course of the disease and effectiveness of therapy.

Arch. Int. Med. 92:185-188, 1953.

Surgery

Fabric Prosthesis

Repair of massive defects of the abdominal wall, as in cases of cancer, can be accomplished with Fiberglas as a prosthesis. The fabric is inorganic, durable, flexible, does not shrink or absorb moisture, and is insoluble in organic solvents, reports Dr. Creighton A. Hardin of the University of Kansas, Kansas City. In 2 patients and in animal trials, the material was found to be more efficacious than most metallic prostheses of silver, stainless steel, or tantalum. Repaired areas were strong, supple, and free moving and did not extrude spontaneously. Active fibroblastic infiltration without tissue reaction or purulent exudation was observed. Insignificant adhesions developed only in cases in which the peritoneum was removed.

J. Kansas M. Soc. 54:117-120, 1953.

Obstetrics

Test for Pregnancy

A nonbiologic test for chorionic gonadotropin utilizes filter paper electrophoresis of urine. Identification of a characteristic electrophoretic pattern of a protein was possible in 19 of 20 urine samples from women known to be in the first trimester of pregnancy, report Drs. H. M. Stran and G. E. Seegar Jones of Johns Hopkins University, Baltimore. The pattern was not demonstrable in 12 nonpregnant urine specimens. Electrophoresis of urine from cases of proteinuria reveals a peak at the anode, whereas the placental hormone migrates to the cathode. False-positive results are possible, however, since pituitary gonadotropes are chemically related to chorionic gonadotropin and also migrate to the negative pole.

Bull. Johns Hopkins Hosp. 93:51-53, 1953.

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NEW TOMORROW-
AND TOMORROW!

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DIAGNOSTIC SET DESIGNED
FOR A LIFETIME OF
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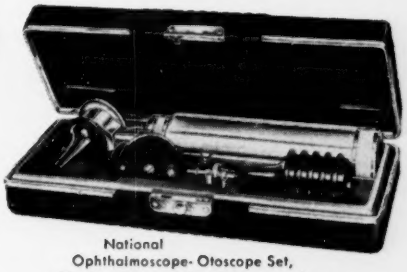

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Ophthalmoscope-Otoscope Set,
with closed or open head otoscope; in new light-weight, flexible, molded nylon case, fitted with soft, washable rubber liners.

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Endocrinology

Urinary Oxytocin

Normal human urine contains an oxytocic material which is not pituitary oxytocin, histamine, or a cholinergic substance. The substance is isolated from the alcohol-ether precipitate of concentrated, dialyzed urine, reports W. C. Stewart of the University of Alberta, Edmonton. A twenty-four-hour urine sample contains about 150 milliunits of oxytocic activity, as referred to a standard solution of pituitary extract. Pituitary oxytocin added to the urine before or during fractionation is not recovered in the same fraction as urinary oxytocin, indicating the nonpituitary nature of the oxytocic. Antihistamines and anticholinergic agents are unable to inhibit the action of the urinary material.

Gynaecologia 136:87-93, 1953.

Pharmacology

Isoniazid Therapy

A dose of isoniazid rapidly penetrates caseous tuberculous material, and significant amounts persist up to four days. Diseased guinea pigs were injected with 5.6 mg. per kilogram of the drug labeled with radioactive carbon. The amounts in various tissues were determined with windowless gas-flow counters by Dr. R. W. Manthei and associates of the University of Chicago.

Federation Proc. 12:348, 1953.

Metabolism

Control of Cholesteremia

Hypercholesteremia can be regulated in some cases by the administration of Monichol, a polysorbate 80-choline-inositol complex. In 15 of 16 patients with hypercholesteremia given daily doses of the complex, serum cholesterol levels decreased and output of urinary cholesterol and formaldehydogenic steroids increased. Levels of urinary 17-ketosteroids and serum protein-bound iodine did not change. No response was obtained in a patient with Addison's disease. The mechanism for lowering the serum cholesterol level may be related to adrenal cortical function, suggest Drs. Daniel A. Sherber and Murray M. Levites of Fordham Hospital, New York City. The complex may change the character of the lipid molecule and the state of serum cholesterol emulsion, thereby promoting better glomerular filtration and enhancing utilization by the adrenal cortex. A survey of serum cholesterol levels of 960 patients revealed that 13.7% had serum cholesterol levels of 300 mg. per 100 cc. or over; 69.5% of the hypercholesteremic patients had cardiovascular disease and 20.7% had diabetes. Incidence of hypercholesteremia is greater in women than in men in the fifth to seventh decades.

J.A.M.A. 152:682-686, 1953.

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efficacy

The therapeutic effect of a multiple sulfa mixture is related to the total amount of sulfonamide present. In Deltamide, the dose of each individual sulfa is reduced without losing clinical efficacy.

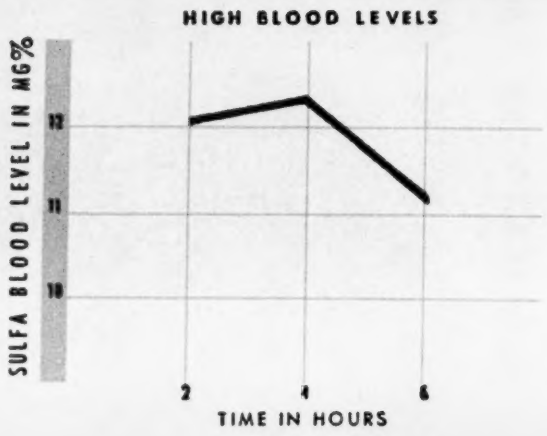
protection for <u>your</u> patients

Renal toxicity of a sulfa mixture such as Deltamide appears to decrease in proportion to the dosage size of each individual sulfa.

That is why there are four sulfonamides in Deltamide

Now... **the new fourth dimension in sulfa therapy**

Clinical experience indicates that the *four* sulfas in Deltamide provide high and sustained therapeutic blood levels. More recently, clinical experience and research indicate that sulfonamides plus antibiotics have a synergistic or additive action against some organisms when used together as antibacterial agents. Renal toxicity and blockage are minimal.



Average sulfa blood level of seven patients after Deltamide (single dose of 0.10 mg. per Kg. of body weight). Personal communication to the Armour Laboratories.

Each tablet or each teaspoonful (5 cc.) of chocolate-flavored suspension contains:
Sulfadiazine.....0.167 Gm.
Sulfamerazine.....0.167 Gm.
Sulfamethazine.....0.056 Gm.
Sulfacetamide.....0.111 Gm.

Tablets: Bottles of 100.
Suspension: Bottles of 4 and 16 oz.

DELTAMIDE

*w/*penicillin

DELTAMIDE

Each tablet or each teaspoonful (5 cc.) of chocolate-flavored suspension contains:
Sulfadiazine.....0.167 Gm.
Sulfamerazine.....0.167 Gm.
Sulfamethazine.....0.056 Gm.
Sulfacetamide.....0.111 Gm.
Potassium Penicillin G (Buffered).....250,000 units

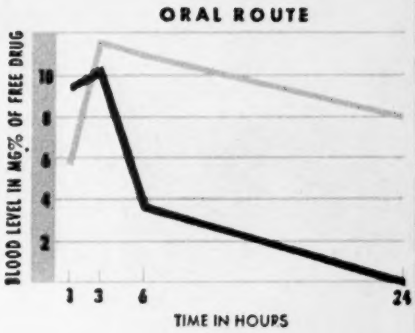
Tablets: Bottles of 36 and 100.
Powder: In 60 cc. vials to provide 2 oz. of suspension by the addition of 40 cc. of water.

the new quadri-sulfa mixtures

Deltamide produces highly efficient sulfonamide blood levels, with less danger of renal toxicity.

A comparison between a widely used single sulfonamide and a multiple mixture demonstrates that the mixture exhibits markedly higher and considerably better sustained blood levels.

From Lehr, D.: Antibiotics & Chemotherapy 3: 71, 1953. Chart is based on data from Table I (experimental animal).



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A Report on the Double-Filtering Action of King-Size, Filter-Tip VICEROY

VICEROY Now Combines the Advantages of Both King-Size and Filter-Tip Cigarettes

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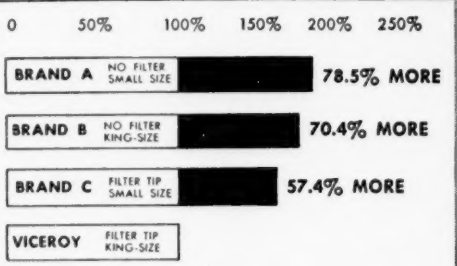
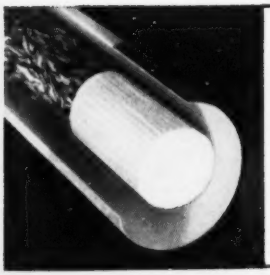
As Proved by Testing Methods Acceptable to the United States Government

A Quantitative Comparison of Nicotine and Tars Measured in the Smoke of Leading Cigarette Brands



SOURCE: Comparative smoking tests of the leading selling brand in each category: small size, king-size and filter tip.
(NOTE: As VICEROY is by far the leading selling filter-tip cigarette, the second-place filter-tip brand was used for comparison.)



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Thiamine Mononitrate (6XMDR*)	6 mg.
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Nicotinamide (2XRDA†)	30 mg.
Pyridoxine Hydrochloride	1 mg.
Vitamin B_{12} (as vitamin B_{12} concentrate)	2 mcg.
Pantothenic Acid (as calcium pantothenate)	10 mg.
Liver Fraction 2, N.F.	0.3 Gm. (5 grs.)
Brewer's Yeast, Dried	0.15 Gm. (2½ grs.)

Sur-bex with Vitamin C contains 150 mg. of ascorbic acid (5XMDR*) in addition to the vitamin B complex factors above.

*Minimum Daily Requirement
†Recommended Daily Dietary Allowance

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(ABBOTT'S VITAMIN B COMPLEX TABLETS)

or SUR-BEX with C

Neuropsychiatry

Emotion and Sebum Secretion

Changes in the emotional state of the individual affect the rate of sebum secretion. When the affective states of fear or weeping were induced in 15 subjects, Drs. Milton Robin and Joseph G. Kepecs of Michael Reese Hospital, Chicago, found that secretion was accelerated. Relaxation slowed the process. Subsequent tests in 5 additional patients indicated that the results in the original subjects could not be attributed to emotional hyperhidrosis.

J. Invest. Dermat. 20:373-384, 1953.

Hematology

Platelet Alterations

Common laboratory procedures cause reversible changes in thrombocytes. Normally, the circulating platelets are smooth, thin, flat disks. In blood collected with silicone, added to citrate or oxalate, and kept at 37° C. for thirty minutes in glass tubes, over 80% of platelets are disks, reports Dr. Marjorie B. Zucker of New York University, New York City. Ethylenediamine tetracetate blood contains few disks, and more than 50% of thrombocytes are spiny spheres. In citrated or oxalated blood exposed to 0° C. for ten minutes, 60% of platelets are spiny globes and less than 10% disks. On return to 37° C. for twenty minutes, 40% are disks and 30% banana or sperm shaped. Washed platelets in saline kept at 37° C. for forty-five minutes lose the disk form, but 45% remain flat and round if incubated in plasma.

Federation Proc. 12:163, 1953.

Hematology

Hemolytic Blood Factor

A rare isoantigen was found in red cells of an infant with hemolytic disease of the newborn. The substance was lacking in the mother but was identified in the father. The same factor was discovered in 4 of 7 individuals representing 3 generations of the family involved, but was not once encountered in more than 450 random tests. Dr. Israel Davidsohn and associates of Chicago Medical School and Mount Sinai Hospital, Chicago, examined in detail blood formulas of the proposita, her husband, and his family. The name Berrins and symbols Be^a and anti-Be^a are suggested for antigen and antibody.

Federation Proc. 12:440, 1953.

Therapy

Discoid Lupus Erythematosus

Chloroquine diphosphate is of value in treatment for chronic discoid lupus erythematosus. Of 21 patients given the agent, all but 5 showed satisfactory response, report Dr. Leon Goldman and associates of the University of Cincinnati. The dosage schedule included an average dose of 0.25 gm. twice daily for one or two weeks followed by 0.25 gm. daily for four to six weeks. In some cases the initial dose was 0.25 gm. three times daily for one or two weeks. Although chloroquine diphosphate is less toxic than quinacrine, prolonged administration may cause such toxic symptoms as pruritus, headache, nausea, anorexia, diarrhea, difficulty in visual accommodation, and weight loss.

J.A.M.A. 152:1428-1429, 1953.

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Malone, H. J.; Klimkiewicz, G. R., and Gribetz, H. J.:
A Study of the Hypnotic Effect
of Dormison in Children, J. Pediat. 41:153, 1952.

the hypnotic of choice."

May, P. R.A., and Ebaugh, F. G.: Use of Hypnotics
in Aging and Senile Patients: A Clinical
Study of Dormison, J.A.M.A. 152:801, 1953.

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Virology

Diagnosis of Poliomyelitis

A stable strain of human epithelial cells is well adapted to poliomyelitis tests and easily maintained in vitro. The strain was employed by Drs. Jerome T. Syverton and William F. Scherer of the University of Minnesota, Minneapolis, for isolation of virus from patients and for specific serologic typing by the neutralization tissue culture technic. Fecal specimens from epidemics of 1950, 1951, and 1952 were tested in preliminary trials.

Federation Proc. 12:462, 1953.

Pharmacology

Hemostatic Agent

Persistent bleeding of diverse etiology is often amenable to therapy with adrenochromazone complex. The preparation, Adrenosem, is the stable mono-oxime or monosemicarbazone of adrenochrome solubilized with sodium salicylate, reports Dr. Daniel A. Sherber of New Rochelle, N.Y. Adrenochrome is an unstable, nonsympathomimetic oxidation product of adrenalin that possesses antihemorrhagic activity. Preoperative intramuscular administration of 5 mg. Adrenosem is usually sufficient to prevent postoperative bleeding. However, the drug may be administered orally or intramuscularly in amounts up to 60 mg. daily without toxic manifestations. Retinitis and epistaxis of malignant hypertension, gastrointestinal and pulmonary bleeding, manifestations of hemorrhagic purpura, hemophilia, and familial hereditary telangiectasis respond to adrenochromazone complex.

Am. J. Surg. 86:331-335, 1953.

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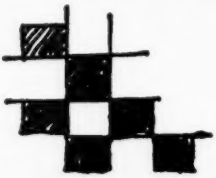

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"'Balance due' doesn't mean we owe the patient."

Hepatology

Diagnosis of Tumor

Translumbar aortography may aid in detection of hepatic tumors. A radiopaque medium was injected near the origin of the celiac trunk in 4 patients with suspected tumor. Primary or secondary liver tumors were indicated by the aortograms and subsequently confirmed at autopsy or laparotomy, report Dr. Bernardo Milanés and associates of the General Calixto García University Hospital, Vedado-Havana, Cuba. Visualization of abnormal vascularity and diversion or division of the hepatic vessels are considered diagnostic signs of hepatic malignancy.

Angiology 4:312-320, 1953.

Bacteriology

Histamine Reaction

Sensitivity to injected histamine increases as much as 200-fold after adrenalectomy or vaccination of mice against *Hemophilus pertussis*. Rising doses of histamine, up to about 0.5 mg. of base, heighten the mortality rate of the mice, find Dr. J. Munoz and associates of West Point, Pa. As the dose is increased up to 8 mg. deaths become fewer, but again mount when dosage approaches ordinary toxic levels. If the mice are also treated with other substances, such as aspirin, starch, carboxymethylcellulose, colchicine, or propylene glycol, the paradoxic response occurs regularly.

Federation Proc. 12:455, 1953.

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1. Hammes, E. M.: Pain Relieving Drugs, The Journal Lancet, 72:67 (Feb.) 1952.
2. Rehfuss, M. E.; Albrecht, F. K. and Price, A. H.: Practical Therapeutics, Baltimore, Williams & Wilkins Company, 1948, p. 128.

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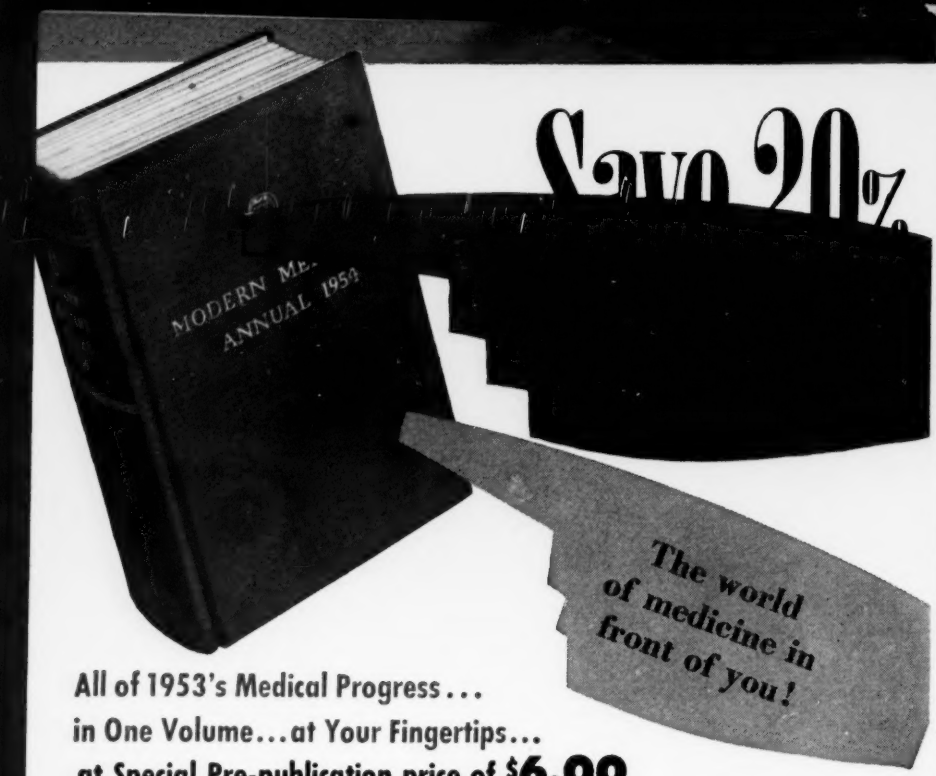

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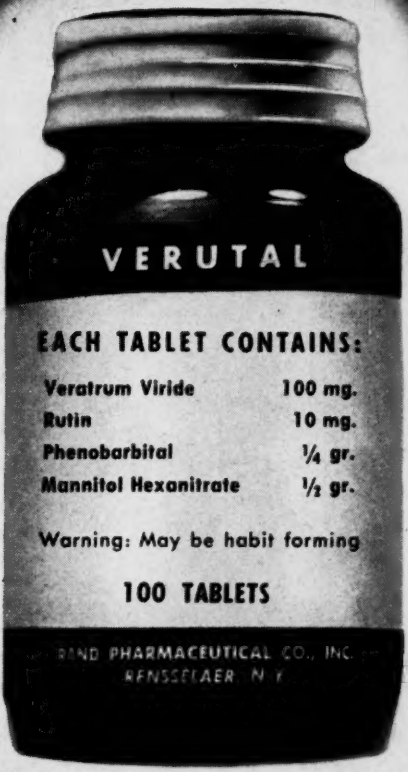
Cardiology

Precordial Movement Record

Low-frequency precordial movements resulting from heart pulsations may be accurately recorded with a simple apparatus consisting of a 2-in. metal bellows and a piezoelectric transducer. The records are termed kinetocardiograms by Dr. E. E. Eddleman, Jr., and associates of the Medical College of Alabama, Birmingham. A 1½-in. metal arm with a 7-mm. flat endpiece is attached to the bellows, and the bellows is connected to the transducer with a length of rubber tubing. Pickup piece and bellows are mounted on a crossbar and, with the use of a universal type clamp, can be placed perpendicularly to any point on the chest. The output signal is led into a standard electrocardiographic recorder. Records are obtained when the patient holds his breath at the end of normal expiration to eliminate respiratory movement. Kinetocardiograms taken from the precordium at points that correspond to the conventional electrocardiographic leads V_1 to V_6 show similarities at corresponding points in healthy subjects. Kinetocardiograms obtained from patients with severe angina pectoris or organic mitral insufficiency reveal significant deviation from the normal patterns obtained from the records of healthy individuals.

Circulation 8:269-275, 1953.

in HYPERTENSION



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1. Wilkins, R. W., Miss. Doctor 30:359-363, 1953—Modern Medicine, Sept. 15, 1953.

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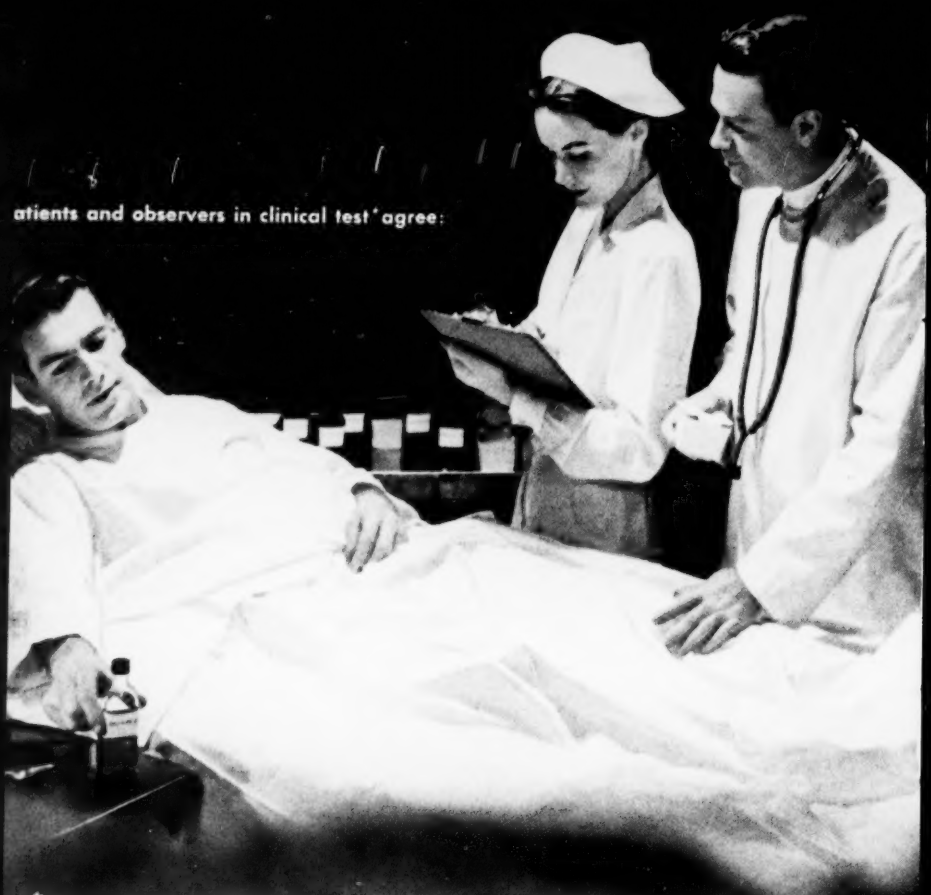
Ann. Allergy 11:354-358, 1953.

atients and observers in clinical test* agree:



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*Cass, L. J. and Frederik, W. S.: Am. Pract. and Digest of Treat., 2:844, 1951. Report of blind test on 52 hospitalized patients.

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BASIC SCIENCE *Briefs*

Pathology

Acute Pulmonary Edema

Intratracheal injection of carbohydrate solutions or of milk mixtures with added carbohydrate content produces pulmonary edema in rabbits and guinea pigs. The severity of the reaction can be controlled by the concentration and the volume of material injected, reports Dr. Thomas J. Moran of the University of Pittsburgh. By introducing 12.5% or stronger solutions of dextrose, lactose, or maltose or by increasing the amount of carbohydrate in the milk mixtures to 12.5%, acute, often fatal, pulmonary edema occurred in the animals. Pulmonary edema appeared to result from the difference in the osmotic pressure between the fluid in the alveolar capillaries and the injected hypertonic solution in the alveolar spaces.

Am. J. Dis. Child. 86:45-50, 1953.

Genetics

Sex in Bacteria

Some strains of *Escherichia coli*, especially K-12, appear capable of sexual processes. Recombination of genes governing a wide variety of characters occurs in a small but significant number of cells in mixed cultures of the bacteria under suitable conditions, report Drs. Joshua Lederberg and E. L. Tatum of the University of Wisconsin, Madison, and Stanford University, San Francisco. The process apparently involves cell-to-cell contact and copulation or conjugation with zygote formation. Analysis of the recombination products indicates that genes are arranged in linear order on one or more chromosomes.

Science 118:169-174, 1953.

Nephrology

Ultramicroscopic Renal Structure

As seen by the electron microscope, glomerular filtration in rat kidney apparently involves 3 processes. Particulate bodies are first separated from plasma by a thin, highly porous membrane supported away from the thicker, more finely porous basement membrane, reports Dr. B. Vincent Hall of the University of Illinois, Urbana. Thus plasma can be freed from corpuscles, then from proteins. The filtrate finally passes through intricate channels and ducts from free surfaces of the basement membrane to glomerular space. The ducts are formed by minute processes which ramify from epithelial cells and appear to hasten filtration by directed pulsation.

Federation Proc. 12:467-468, 1953.

Surgery

Compilation Autografts

Repair of the thoracic aorta in dogs is successfully accomplished by the use of autogenous grafts of the subclavian artery, either compiled or rolled to a tube of adequate diameter. The excised segment can be opened longitudinally and the ends coapted and sutured to form a tube of equal diameter to the aorta. In cases necessitating a graft of larger circumference, Dr. Everett J. Schmitz and associates of the University of Washington, Seattle, divide the opened subclavian segment transversely and suture the lateral edges of each piece to form a wider but shorter tube. Grafts remained patent up to six months and grew apace with the recipient aorta. The relocated vessel did not undergo degeneration and retained histologic integrity.

Surg., Gynec. & Obst. 97:11-18, 1953.

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Reducing the Obese Diabetic on the Knox Gelatine Plan

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1. George F. Baker Clinic and Metropolitan Life Insurance Company: Diabetes in the 1940's, New York, 1940. Metropolitan Life Insurance Company Press, 1940.
2. Abel, M. S., Am. J. Med. Sci. **205**:414 1943.
3. Lewis, T., Vascular Disorders of the Limbs, p. 50, Macmillan, 1936.
4. Armstrong, D. B., et al., J.A.M.A. **147**:1007, 1951.

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Bibliography

(1) Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: J.A.M.A. *149*:729 (June 21) 1952. (2) Byron, C. M., and Orenstein, H. B.: New York State J. Med., *53*:676 (March 15) 1953. (3) Gutman, A. B.: Am. J. Med. *13*:744, 1952. (4) Rowe, A., Jr.; Tufft, R. W.; Mechanick, P. G., and Rowe, A. H.: Am. Pract. & Digest, in press. (5) Kidd, E. G.; Boyce, K. C., and Freyberg, R. H.: Prepared for publication. (6) Steinbrocker, O.; Berkowitz, S.; Ehrlich, M.; Elkind, M., and Carp, S.: J.A.M.A. *150*:1087 (Nov. 15) 1952. (7) Currie, J. P.: Lancet 2:15 (July 5) 1952. (8) Patterson, R. M.; Benson, J. F., and Schoenberg, P. L.: U. S. Armed Forces M. J. *4*:109, 1953. (9) Stephens, C. A. L., Jr.; Yeoman, E. E.; Holbrook, W. P.; Hill, D. F., and Goodin, W. L.: J.A.M.A. *150*:1084 (Nov. 15) 1952. (10) Smith, C. H., and Kunz, H. G.: J. M. Soc. New Jersey *49*:306, 1952. (11) Davies, H. R.; Barter, R. W.; Gee, A., and Hirson, C.: Brit. M. J. 2:1392 (Dec. 27) 1952. (12) Kuzell, W. C., and Schaffarzick, R. W.: California Med. *77*:319, 1952. (13) Graniere, L. W.: J.A.M.A. *150*:1332 (Nov. 29) 1952. (14) Steinbrocker, O.: J.A.M.A. *151*:143 (Jan. 10) 1953. (15) Hinz, C.; Lamont-Havers, R. W.; Cominsky, B., and Gaines, L. M.: J.A.M.A. *151*:38 (Jan. 3) 1953. (16) Stifel, J. L., and Burnheimer, J. C.: J.A.M.A. *151*:555 (Feb. 14) 1953. (17) Bershof, E., and Oxman, A. C.: J.A.M.A. *151*:557 (Feb. 14) 1953. (18) Burns, J. J.; Schulert, A.; Chenkin, T.; Goldman, A., and Brodie, B.: J. Pharmacol. & Exper. Therap. *106*:375, 1952. (19) Wilkinson, E. L., and Brown, H.: Am. J. M. Sc. *225*:153, 1953. (20) Domenjoz, R.: Internat. Rec. Med. & Gen. Pract. Clin. *165*:467, 1952. (21) Delfel, N. E., and Griffin, A. C.: Stanford M. Bull., in press.

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Hepatology

Evaluation of Liver Function

Intravenous administration of sodium cinnamate and measurement of the subsequent rate of the removal of material determine hepatic oxidative ability and provide an index of liver injury. Serial determinations of serum cinnamate concentrations in patients with liver damage were correlated with clinical status by Drs. Abraham Saltzman and Wendell T. Caraway of the Rhode Island Hospital, Providence. Direct relationship between the functional adequacy of the liver and the rate of removal of cinnamate was observed. In 75 cases of hepatitis, cirrhosis, metastasis, or congestion, the rate of decline of serum cinnamate was as low as 0.8% per minute as compared to normal values of 4 to 6%. Jaundice did not interfere with the method of analysis.

J. Clin. Investigation 32:711-719, 1953.

"Boy, does he need glasses!"

The small total dose required affords economy and virtual freedom from side actions.

IN BRONCHIAL ASTHMA—
QUICK RELIEF
LONG-LASTING REMISSIONS

HP*ACTHAR Gel, subcutaneously or intramuscularly, gives quick relief in severe attacks of bronchial asthma, and may provide long-lasting remissions. Patients refractory to all customary measures, including epinephrine, and even to other forms of ACTH, may fully benefit from HP*ACTHAR Gel.

Used early enough, HP*ACTHAR Gel may become a valuable agent in prolonging the life span of asthmatic patients. ACTH "should not be withheld until the situation is hopeless".†

†Editorial, J. Allergy 23: 279-280, 1952.

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HP* ACTHAR *Gel* (IN GELATIN)

ACTHAR® IS THE ARMOUR LABORATORIES BRAND OF ADRENOCORTICOTROPIC HORMONE—CORTICOTROPIN (ACTH).

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We know, from daily contact with thousands of physicians from coast to coast, that a great number use Gelusil personally and for their families. Our professional service records show that many doctors have used it for years for hyperacidity and related gastrointestinal disturbances.

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THE PERSONAL ANTACID OF MANY PHYSICIANS BY PERSONAL PREFERENCE

Nutrition

Atherogenesis in Primates

The induction of atherosclerosis in monkeys is possible when the animals are fed diets high in cholesterol and fat and low in sulfur amino acids. Cebus monkeys, maintained on the regimen eighteen to thirty weeks, acquired characteristic vascular lesions but no visceral cholesterolosis, observe Dr. George V. Mann and associates of Harvard University, Boston. The hypercholesterolemia was largely prevented by supplementing the diet with *dl*-methionine or *l*-cystine. The addition of the amino acids after the serum levels were elevated resulted in complete or partial restoration of normal values.

J. Exper. Med. 98:195-218, 1953.

Neurosurgery

Intervertebral Ossification

Rate and degree of bony intervertebral fusion increase in monkeys when disruption of the cartilaginous plates and addition of basic calcium phosphate (BCP) are combined with simple disk evacuation. Curettage of the cartilaginous plates provides a source of osteoblasts so that the BCP can act as an ossifiable medium, report Dr. Fritz L. Jenkner and associates of the University of Washington, Seattle. Simple disk removal alone results in fibrous proliferation but no limitation of spinal motion. Replacement of the disk with BCP produces a more dense fibrous union with 50% limitation of movement. Disk removal and disruption of the cartilage promote ossification of the intervertebral space.

J. Neurosurg. 10:443-452, 1953.

logically suspected

Diabetes and obesity are closely linked together.[2,3] More than 8 out of 10 diabetics are overweight before the onset of their disease.[1,4,5] "In persons with nondiabetic glycosuria . . . the frequency of subsequent diabetes [is] four times as high in overweight patients."[4] "Of the major diseases, diabetes [in overweight individuals] showed relatively the greatest excess mortality – more than three times the expected number in each sex."[6] It is logical, therefore, to suspect – and test – all overweight patients.

easily detected

Clinitest (Brand) Reagent Tablets provide a rapid, reliable test for urine-sugar – require neither special apparatus nor external heating – a convenient test for both physician and patient.

Clinitest Urine-sugar Analysis Set No. 2155 (UNIVERSAL MODEL) – Plastic carrying case with *Clinitest* Reagent Tablets (moisture-proof – sealed in foil), test tube, dropper, instructions, analysis record and *Clinitest* Color Scale.

AMES **Ames Company of Canada, Ltd., Toronto**

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Gastroenterology

Ganglionectomy and Ulcer

Gastric ulceration produced in rats by pylorus ligation is significantly reduced by simultaneous or preliminary celiac ganglionectomy. Dr. Thomas W. Holmes, Jr., of the Veterans Administration Center, Jackson, Miss., reports that simultaneous celiac ganglionectomy prevented gastric lesions in 50% of animals, and only moderate erosion developed in 20%. Preliminary ganglionectomy was less effective. The visceral and mesenteric hyperemia resulting from ganglionectomy may augment the resistance of gastric mucosa to the necrotizing properties of retained acids, despite increased acidity and diminished volume of digestive juice.

Ann. Surg. 138:240-248, 1953.

Antibiotics

Aureomycin Serum Levels

Large doses of aureomycin do not effect a proportional increase in serum concentration of the drug in rats and guinea pigs. However, adjuvants may enhance the level. When the antibiotic is given in doses of 8 to 200 mg. per kilogram, Dr. Harold J. Eisner and associates of Pearl River, N. Y., find that the most effective auxiliary medicaments are trisodium citrate, monosodium phosphate, and citric, malic, tartaric, malonic, pyruvic, tricarballylic, and lactic acids. The augmentation is apparent within one hour and lasts at least eight hours. These substances probably act by forming complexes with the excess of calcium ions, thus increasing the solubility of the fungal extract.

J. Pharmacol. & Exper. Therap. 108:442-449, 1953.

Dermatology

Isoniazid for Leprosy

Cutaneous lesions of leprosy improve with isoniazid therapy. In 13 patients with lepromatous leprosy given the drug for seven to nine months, size and number of nodules decreased and degree of infiltration was reduced. Isoniazid was administered orally in daily doses varying from 3 to 5 mg. per kilogram of body weight. In some cases, nodules almost completely disappeared. No new nodules formed during therapy, report Dr. Fernando Latapi of Centro Dermatologico Pascua, Mexico City, and associates of New Brunswick, N. J., and the Instituto Dermatologico, Guadalajara, Mexico. Similar results were obtained with lesions of the nasal mucosa and conjunctiva. Posttreatment histopathologic and bacterioscopic studies of biopsies of cutaneous lesions revealed increased formation of interstitial tissue, diminution of density and size of nodular infiltrates, and reduction of bacilli with cigar-packet formation or globi seen in pretreatment biopsies. Benign or moderate lepra reactions occurred in about 50% of the cases.

J. Invest. Dermat. 21:27-35, 1953.

Always...

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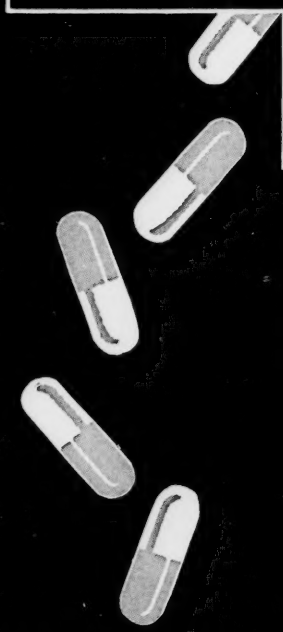

NO MATTER WHAT ELSE ARTHRITIS CALLS FOR

Regardless of other medication indicated, Pabirin is advantageous in every patient with arthritis, neuritis, myositis, gouty arthritis, or rheumatic fever. It quickly controls pain, improves joint mobility; in rheumatic fever it leads to prompt remission.

4 ADVANTAGEOUS FEATURES

- **Lower dosage, higher salicylate levels,** made possible by the presence of PABA.
- **Sodium free,** hence can be given in cardiac disease and with ACTH and cortisone.
- **Better tolerated,** because acetylsalicylic acid is not prone to hydrolyze in stomach.
- **Guards against vitamin C loss** induced by intensive salicylate therapy.

Each easily swallowed Pabirin capsule contains:

Acetylsalicylic Acid	0.23 Gm.
PABA (p-aminobenzoic acid)	0.23 Gm.
Ascorbic Acid	10 mg.

Average dose, three capsules 3 or 4 times daily.

Also available is Pabirin with Codeine, each capsule containing ¼ gr. of codeine phosphate in addition.

All pharmacies are supplied.

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A DORSEY PREPARATION

N.N.R. monograph on Furadantin:

Nitrofurantoin.—Furadantin (Eaton).—

Actions and Uses.—Nitrofurantoin, a nitrofuran derivative, exhibits a wide spectrum of antibacterial activity against both gram-positive and gram-negative micro-organisms. It is bacteriostatic and may be bactericidal to the majority of strains of Escherichia coli, Micrococcus (Staphylococcus) pyogenes albus and aureus, Streptococcus pyogenes, Aerobacter aerogenes, and Paracolobactrum species. The drug is less effective against Proteus vulgaris, Pseudomonas aeruginosa, Alcaligenes faecalis, and Corynebacterium species; many strains of these organisms may be resistant to it. However, bacterial resistance to other anti-infective agents is not usually accompanied by increase in resistance of the organisms to nitrofurantoin. The drug does not inhibit fungi or viruses.

Nitrofurantoin is useful by oral administration for the treatment of bacterial infections of the urinary tract and is indicated in pyelonephritis, pyelitis, and cystitis caused by bacteria sensitive to the drug. It is not intended to replace surgery when mechanical obstruction or stasis is present. Following oral administration, approximately 40% is excreted unchanged in the urine. The remainder is apparently catabolized by various body tissues into inactive, brownish compounds that may tint the urine. Only negligible amounts of the drug are recovered from the feces. Urinary excretion is sufficiently rapid to require administration of the drug at four to six hour intervals to maintain antibacterial concentration. The low oral dosage necessary to maintain an effective urinary concentration is not associated with detectable blood levels. The high solubility of nitrofurantoin, even in acid urine, and the low dosage required diminish the likelihood of crystalluria.

Nitrofurantoin has a low toxicity. With oral administration it occasionally produces nausea and emesis; however, these reactions may be obviated by slight reduction in dosage. An occasional case of sensitization has been noted, consisting of a diffuse erythematous maculopapular eruption of the skin. This has been readily controlled by discontinuing administration of the drug. Animal studies, using large doses administered over a prolonged period, have revealed a decrease in the maturation of spermatozoa, but this effect is reversible following discontinuance of the drug. Until more is known concerning its long-term effects, blood cell studies should be made during therapy. Frequent or prolonged treatment is not advised until the drug has received more widespread study. It is otherwise contraindicated in the presence of anuria, oliguria, or severe renal damage.

Dosage. — Nitrofurantoin is administered orally in an average total daily dosage of 5 to 8 mg. per kilogram (2.2 to 3.6 mg. per pound) of body weight. One-fourth of this amount is administered four times daily—with each meal and with food at bedtime to prevent or minimize nausea. For refractory infections such as Proteus and Pseudomonas species, total daily dosage may be increased to a maximum of 10 mg. per kilogram (4.5 mg. per pound) of body weight. If nausea is severe, the dosage may be reduced. Medication should be continued for at least three days after sterility of the urine is achieved.

for the 3 patients out of 4

who have Seborrheic Dermatitis of the scalp . . . prescribe

this effective new product

Effective control of scaling . . . prompt relief of itching and burning . . . extreme simplicity of use . . . this is the story of SELSUN Sulfide Suspension, Abbott's new *prescription-only* product for the management of seborrheic dermatitis of the scalp. Clinical investigators who treated 400 patients[1, 2, 3] found SELSUN effective in 92 to 95 percent of cases of mild seborrhea (common dandruff), and in 81 to 87 percent of all cases of seborrheic dermatitis.

SELSUN was successful in many cases that had failed to respond to other recognized methods of treatment. Optimum results were obtained in four to eight weeks, although itching and burning stopped after the second or third application in most cases. After the initial treatment period, a single application keeps the scalp free of scales for one to four weeks.

SELSUN is convenient to use, because it is simply applied while washing the hair and then rinsed out. It thus leaves the hair clean and odorless, and obviates the problem of stains on clothing and linens. Specific research on toxicity[1, 2] shows there are no harmful effects from external use of SELSUN as recommended. Supplied by pharmacies in 4-fluidounce bottles, with tear-off labels. Dispensed only on a physician's prescription. Abbott

References:

1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Siepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

PRESCRIBE **SELSUN**

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SULFIDE *Suspension*

(SELENIUM SULFIDE, ABBOTT)

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Nellie Nifty, R.N.

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widely useful in anxiety and nervous tension . . . controls the tremors and malaise of acute alcoholism

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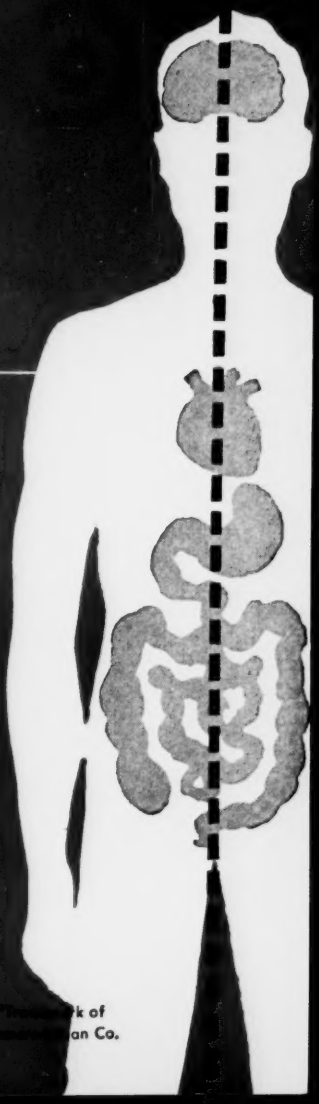
SUPPLIED:



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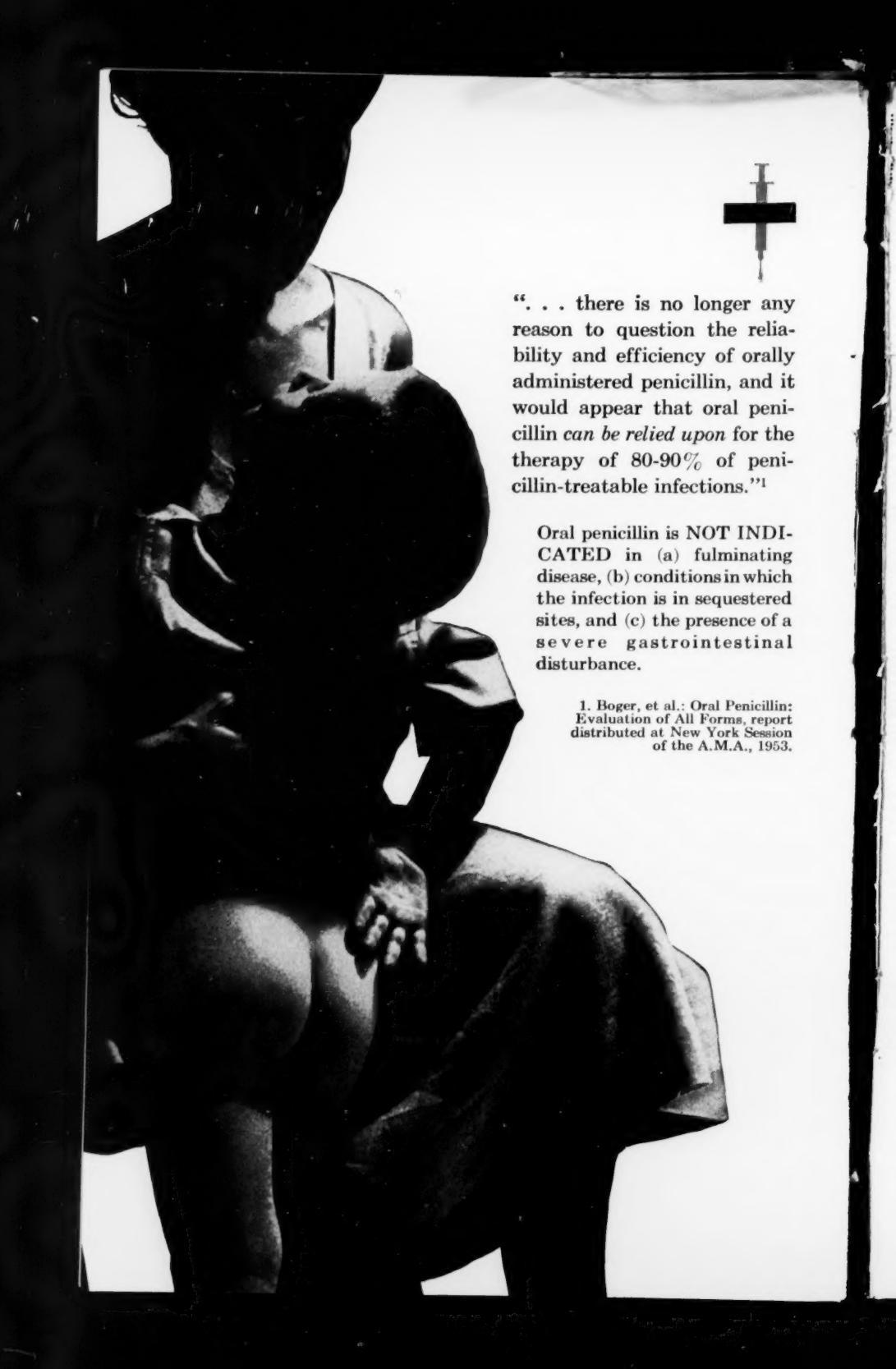

"... there is no longer any reason to question the reliability and efficiency of orally administered penicillin, and it would appear that oral penicillin *can be relied upon* for the therapy of 80-90% of penicillin-treatable infections."[1]

Oral penicillin is NOT INDICATED in (a) fulminating disease, (b) conditions in which the infection is in sequestered sites, and (c) the presence of a severe gastrointestinal disturbance.

1. Boger, et al.: Oral Penicillin: Evaluation of All Forms, report distributed at New York Session of the A.M.A., 1953.

for high blood levels

for flexibility of dosage

for palatability

for ease of administration

Rely on the 'Eskacillins'

per teaspoonful 

'ESKACILLIN 50'	50,000 units potassium penicillin G
'ESKACILLIN 100'	100,000 units potassium penicillin G
'ESKACILLIN 250'	250,000 units procaine penicillin G
'ESKACILLIN 500'	500,000 units procaine penicillin G

For combined penicillin-sulfonamide therapy:

'ESKACILLIN 100-SULFAS' 100,000 units potassium penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of 3 sulfonamides

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ESKACILLINS*

are painless penicillins

are effective penicillins

*T.M. Reg. U.S. Pat. Off.

Patients... I have met

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Slow Motion

The 6-year-old boy I had recently circumcised walked painfully down the hospital hall and then remarked, "Gosh, Doc, this is sure gonna slow me down for a while."—T.S.M.

Never Too Old

Since my diabetic patient was constantly cheating on her diet, I found it necessary to send her to the hospital although the only available room was in the maternity ward. Her granddaughter visited her there and told an astonished stranger in the maternity ward hallway, "My grandmother is here because she's been cheating again."—C.V.M.

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estrogen-progesterone
effective in
menstrual disturbances:

Cyclogesterin
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Each scored tablet contains:

Estrogenic Substances* .. 1 mg.
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Progesterone .....30 mg.

**Naturally occurring equine estrogens (consisting primarily of estrone, with small amounts of equilin and equilenin, and possible traces of estradiol) physiologically equivalent to 1 mg. of estrone.*

Available in bottles of 15 tablets.

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Only two pulvules of 'Trinsicon' daily supply *therapeutic quantities* of all known antianemia factors. 'Trinsicon' contains concentrated intrinsic factor (to assure more complete absorption of vitamin B_{12}), as well as *therapeutic quantities* of iron, vitamin C, vitamin B_{12}, and folic acid.

To provide the most convenient and economical therapy in both primary and secondary anemias, prescribe 'Trinsicon'!

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Each pulvule supplies:

Liver-Stomach Concentrate, Lilly (Containing Intrinsic Factor)	300 mg.
Vitamin B_{12} (Activity Equivalent)	15 mcg.
Ferrous Sulfate, Anhydrous	300 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	1 mg.

Supplied in bottles of 60 (30 days' supply) and 500.

• NEW CONVENIENT DOSAGE

Marathon

"Have you been drinking hot water an hour before breakfast every morning as I advised?" I asked my patient.

"I tried," he replied weakly, "but I just couldn't keep it up for more than fifteen minutes."—B.P.S.

Extreme Care

When I received my degree to practice podiatry, a cranioneurologist suggested that we share a suite of offices and put out a shingle stating: "We'll take care of you from top to toe."—D.B.

"It's been two years since your last checkup, Doctor."

Emergency

My wife answered the phone and called to me, "Hurry! Some man says he can't live another five minutes without you!"

"Relax, Mother," said my daughter coming to the phone, "I'm sure the message is for me."—H.H.

The Weaker Sex

When an obstetric patient's husband told me about the difficult time he had had when the baby was born, I reminded him that it was his wife who had given birth.

"Of course she did," he answered, "but she had an anesthetic!"—B.P.S.

INDEX TO ADVERTISERS

A COMPARISON OF SULFONAMIDE PREPARATIONS:

Capacity to Produce Adequate, Sustained Blood Levels

From a Recent Report: "*The Effect of an Alumina Gel Vehicle on the Blood Level of a Triple Sulfonamide Preparation after Oral Administration.*"[1]

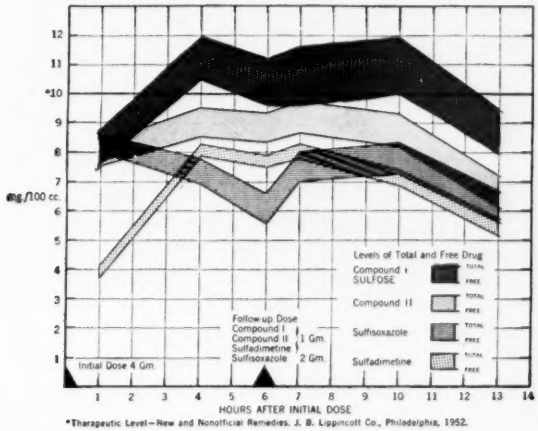
"In accordance with the standards established by the Council on Pharmacy and Chemistry of the American Medical Association[2] regarding therapeutic blood levels, it was deemed advisable to judge the effectiveness of the various preparations on the basis of their ability to provide sustained blood sulfonamide concentrations of 10 to 15 mg. per 100 cc."

Four sulfonamide preparations were studied:

- **(a)** SULFOSE®—triple sulfonamides in alumina gel suspension
- **(b)** Compound II—triple sulfonamides without alumina gel
- **(c)** Sulfisoxazole tablets
- **(d)** Sulfadimetine tablets

For details on dosage and comparative blood levels obtained, see chart below.

Fig. 1 Blood Sulfa Levels (TOTAL & FREE) at various times after starting therapy



*Therapeutic Level—New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1952.

RESULTS

1. Only one preparation—SULFOSE—produced average blood levels exceeding 10 mg. total sulfonamides per 100 cc.
2. Average acetylation was moderate for all preparations, ranging around 10 per cent (±5 per cent).
3. Triple sulfonamides produce greater and better sustained blood levels.
4. SULFOSE—*triple sulfonamides in alumina gel suspension*—provided both "higher initial as well as more prolonged therapeutic levels . . ."[1]

SULFOSE®

Triple Sulfonamides

SUPPLIED: Suspension, bottles of 1 pint. Each 5 cc. teaspoonful contains 0.167 Gm. each of sulfadiazine, sulfamerazine and sulfamethazine in a special alumina gel vehicle.

Also available: Tablets, bottles of 100 and 1000.

References: 1. Berkowitz, D.: Antibiotics & Chemotherapy, **3**:618 (June) 1953.
2. New and Nonofficial Remedies. J.B. Lippincott Company, Philadelphia, 1952, p. 103.

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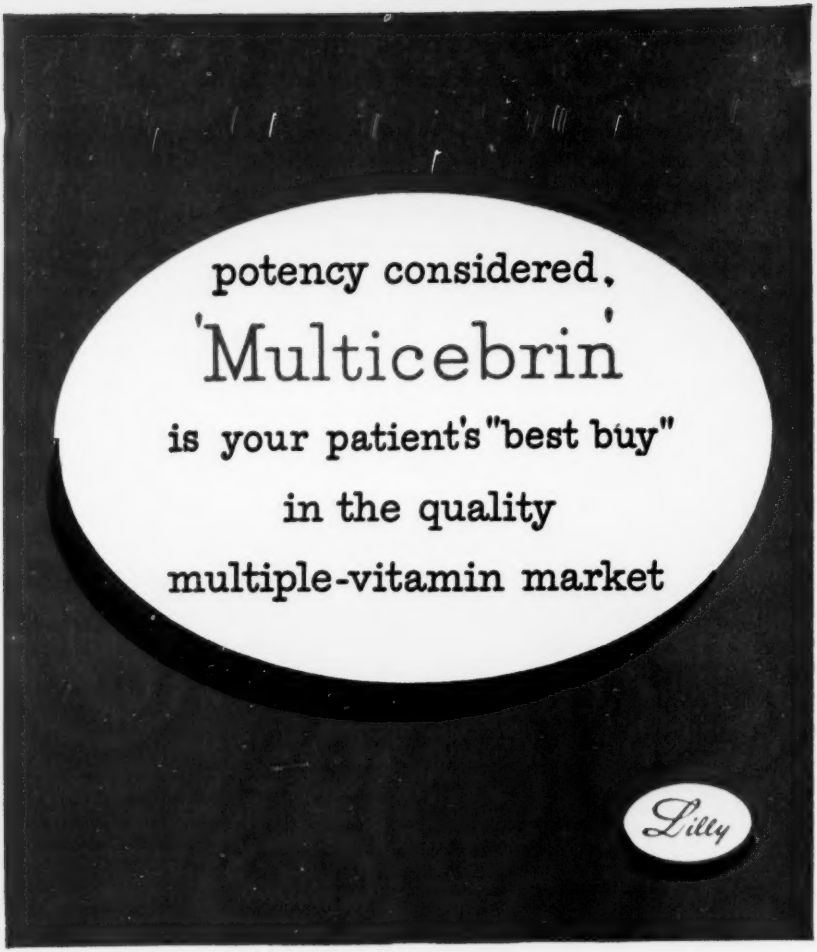
Philadelphia 2, Pa.



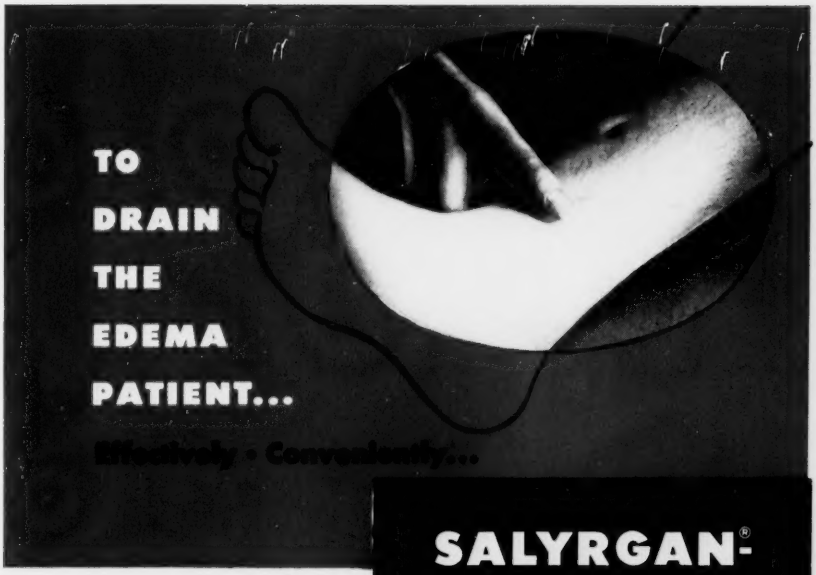
Each gelseal contains:

Thiamin Chloride	3 mg.
Riboflavin	3 mg.
Pyridoxine Hydrochloride	1.5 mg.
Pantothenic Acid (as Calcium Pantothenate)	5 mg.
Nicotinamide	25 mg.
Vitamin B_{12} (Activity Equivalent)	3 mcg.
Folic Acid	0.1 mg.
Ascorbic Acid	75 mg.
Distilled Tocopherols, Natural Type	10 mg.
Vitamin A Synthetic	10,000 U.S.P. units
Vitamin D Synthetic	1,000 U.S.P. units

GELSEALS

'Multicebrin'

(Pan-Vitamins, Lilly)



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as well as
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cirrhosis

By a dual action on the kidneys which both increases the volume of the glomerular filtrate and diminishes tubular resorption, Salyrgan-Theophylline rapidly produces copious diuresis.

The response to Salyrgan-Theophylline solution does not "wear out" so that doses may usually be repeated as required, without loss of efficiency.

With Salyrgan-Theophylline tablets taken orally, patients appreciate the gradual, non-flooding diuresis and the greater convenience. Salyrgan-Theophylline tablets "can successfully decrease the patient's burden... either by decreasing the need for frequent mercurial injections or by actually replacing the injections entirely."[1]

WINTHROP

1. Abramson, Julius, Bresnick, Elliott, and Sapienza, P. L.: *New England Jour. Med.*, 243:44, July 13, 1950.

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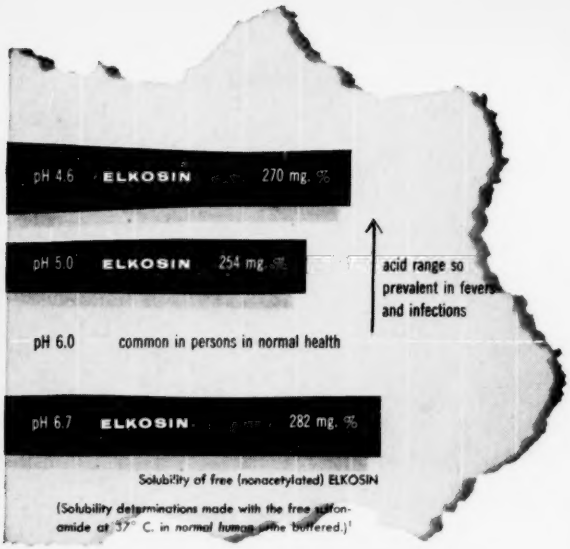

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in the acid pH range

so prevalent in fevers and infections

alkalis not needed

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a new advance in sulfonamide safety

tablets 0.5 Gm., double-scored. Bottles of 100 and 1000

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1. Ziegler, J. B.; Bagdon, R. E., and Shabica, A. C.: To be published.

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